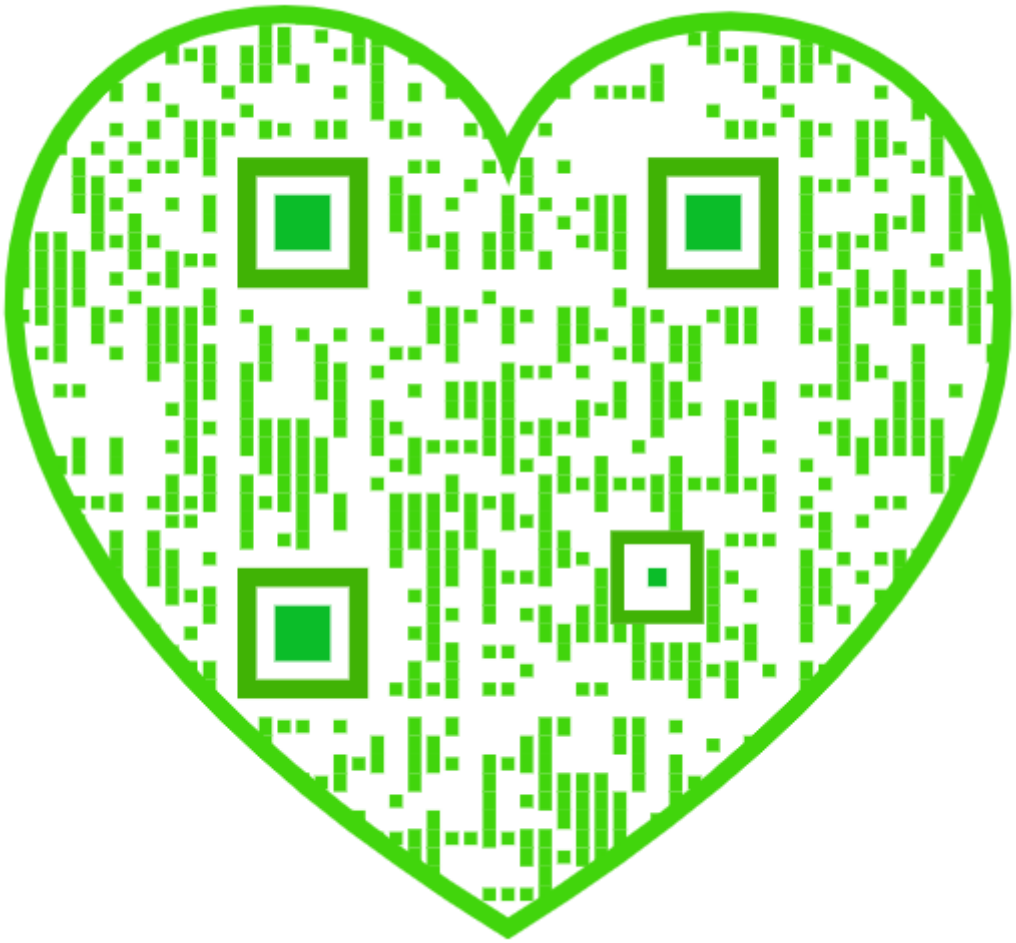

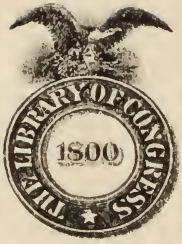

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THE STORY OF COAL AND IRON IN ALABAMA

OLD TANNEHILL

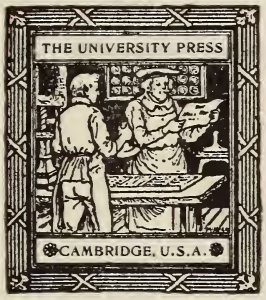
Majestic in the forest, yet ruling no more,— it has a burdened, solitary heart

THE STORY OF COAL AND IRON IN ALABAMA

BY

ETHEL ARMES

AUTHOR OF "MIDSUMMER IN WHITTIER'S COUNTRY"



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TO
MY MOTHER
LUCY HAMILTON KERR ARMES

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INTRODUCTION

THE State of Alabama is now generally regarded as the coming center of the iron and steel industry of North America, and the Birmingham District as the ultimate rival of the Pittsburg District. Since 1890 Alabama has, as a matter of fact, dictated the price of pig iron to the United States. According to the latest statistics she ranks first in the production of brown ore, third in the production of red hematite, and third in total production; she is third in the production of coke, fourth in that of pig iron, fifth in production of coal, and fifth in the manufacture of steel.

That capital to a stupendous amount is being steadily invested year by year in the mineral region here is a simple commercial fact. As it happens there prevail in this region certain rather extraordinary conditions from the geological viewpoint: a combination of iron ore, coal, and limestone — all the materials for the manufacture of pig iron, and consequently for the manufacture of steel — in such close proximity as to be practically in one locality. Not to infer in the least that it is the "best" coal, the "best" ore, the "best" flux "in the world," but simply it is the combination of the three in such a way that results in the making of pig iron and steel are obtainable at low cost. Ways and means to commercial success in the iron and steel business in this particular section of the country appear, in short, such as to influence capital at home and abroad, and indeed to arouse a national curiosity and interest in things Alabamian.

It is, therefore, mainly her coal and iron business that enables Alabama to stand upon the self-respecting basis, industrially speaking, that she is beginning to have to-day. Although called a cotton State pure and simple for over three generations (iron not being officially mentioned as a product of Alabama as late as the eighteen-seventies), yet a search into such fragmentary records as exist reveals the circumstance that iron making has actually been in progress in this State for nearly a hundred

years. A blast furnace, indeed, was built before Alabama was admitted to the Union. Coal mining operations, brown ore mining, forges, and furnaces antedate cotton mills. Yet no complete statistical or chronological table of events in the coal and iron record of Alabama or her sister States has ever been compiled; no connected historical narrative has ever before been attempted. Year after year, generation after generation, the facts have fed the winds, and full a century's work has gone unchronicled. Wherefore the ground is virgin soil. Out of origins far back and obscure, and apparently slight and incidental, has come the making of big modern business.

The early chronicles of nearly all coal and iron companies operating in Alabama to-day have qualities of a peculiar historic interest, and of far other than commercial flavor, — roots, indeed, reaching deep almost as their mines, into the substrata and bed-rock of Alabama legend and history. Tangled and dry at first they may seem, for they are found at the end of far dark windings, but when uncovered to sunlight, they have not only freshness and vigor, but real significance in State records, and, in fact, in some instances a direct relationship to United States history. There is, for instance, a close connection with the United States Army and Navy, Confederate States Army and Navy, United States Senate and House of Representatives, the Confederate Congress, and with the railroad interests of the country, while there is scarcely a mineral section of the United States, or indeed of England, Scotland, and Wales, whose history is not in some way related — mainly through the workers in the field — with the mineral development of the South. Among these workers are descendants of old Dutch, Welsh, Scotch, English, and Cornish miners and iron-masters; of Irish scholars and soldiers; of English Puritans, Quakers, and French Huguenots; of early colonists of Virginia, North and South Carolina, and Georgia; and descendants of soldiers of the American Revolution, the War of 1812, and the Mexican War.

If ever an industry was set against a large background, one of stirring life and romance, it is the coal and iron business of Alabama. It is, indeed, of the State itself, — bone of its bone and blood of its blood. The history of the one fully told is the history of the other; the elements compounding the one have made the other. The facts all gathered together in themselves tell a story with a quick pulse. Here are struggle, pathos,

and humor, intrigue, defeat, and triumph. Yet there are many coal and iron men of the State, who, like that pioneer leader of the Birmingham District, Colonel DeBardeleben, have but little patience with the idea of turning it all into a book. The colonel does not care for books anyhow. "The rocks and the forest are the only books I care about reading," he says. "I can sit on an old stump and paint all the pictures I want. . . . The future is what a man looks to. Who cares a hang about the past? — things that are over and done? Well — and I know my own measure — just so big and no bigger — know what I 've done and what the other fellows have done. What 's the use of writing any of it down? When anything is written about it sounds like slush. Then, besides, it 's all such an old story."

It is just that — an old story — old in the Hill Country of Alabama, but new to the outside world. The iron-masters of the State have all been far too busy making iron ever to think of the making of books about it. Not that they have been so much self-engrossed, perhaps, as work-engrossed. Few among them have ever stopped to review the work of their fathers before them, or for that matter to see the results, beyond dollars and cents, of their own work. Few have ever paused to reflect upon former processes, — the fallen forces that feed the new, young growth, — the old, slow, heavy ways and means of toil out of which the present-day stature of the coal and iron business has in such measure been builded, so vast a business, indeed, that all the world is turning South and asking how and why.

Beginning with 1798, that significant year of Southern history when the United States organized Mississippi Territory out of the land ceded by Spain, this story follows the growth of the iron and coal business, step by step, from that very year to the present time. It shows the evolution of coal and ore mining, blast furnace construction, iron and steel making, the efforts, discoveries, activities, experiments, demonstrations, and achievements of four generations. It is found, indeed, simply a mounting by slow and picturesque degrees from nothing up to something, a change from simple to complex. from individual effort to organized power. The whole is curiously inwrought with many-colored threads, tapestry woven as it were by Indian, French, and Spanish.[1] It tells the life story

[1] The first Catalan forges recorded in the South, for instance,— if one may tread back into centuries beyond strict historical reckoning,— were put

of the pioneer settlers, the early blacksmiths, the first prospectors and coal miners, the iron-masters, the geologists, the planters, and bankers, the railroad men, the military men, — all who were factors at all in the development of the mineral region of Alabama during the nineteenth century. The great debt that modern Alabama owes to her pioneer workers — those few strong, far-seeing men who long ago had faith in her great resources and dreamed the dreams that are now coming true — can scarcely be overestimated. Theirs was no easy task. It meant fight to build their iron works, fight to make their iron, fight to carry it to market, and everlasting fight to get the money for it after it was sold. And some of these men had far wider notions than merely to sell their pig iron as this book tells; they had the spirit of empire builders. Yet, to see anything especially heroic in the man living right down in your own home town or county, one who may be simply your next-door neighbor, takes imagination, it is said. But when one looks back upon the lives of the road-breakers of the State, and in the ease and opportunity of to-day discerns the old trials, he comprehends what heavy toil at such small gain it meant, what patience, what grit.

The scene of the story for the most part is out in the woods of the Hill Country, — a land of big spaces, wide and rugged and wild, — true American in every sense. Alabama, one of the southernmost States bordering the Gulf of Mexico, has an area a trifle larger than that of England. From north to south the State is three hundred miles, and from east to west, two hundred, or, in all, fifty-two thousand square miles, of which one-fifth is known as the mineral region.

Tennessee, Georgia, and Mississippi, the three States bordering Alabama on the north, east, and west, are so intimately connected with all the periods of her industrial and political history that at times the State lines are all but obliterated. Florida has less import, reaching white and warm — pale sand and quivering pine — along Alabama's southern border, leaving our State but a sixty-mile coast stretch on the Mexican Sea, — a precious coast line, laden with historic treasure, but having significance here only as port of outlet for coal and iron

up, according to Pickett, by De Soto's soldier-artisans to temper the steel of the Spanish swords and to repair the Spanish arms and armour, as the *adelantado* and his men tramped through the wilderness.

to the seaports of the world. Our main concern is, of course, farther north, where the great Appalachian region penetrates the State and the long lines of its faraway hills merge into the southern plains. Foothills are here, mountain ridges, valley region, plateaux, every aspect, feature, form, and detail of that mountain system of such gigantic, formidable mold, reproduced in the extreme South in miniature as it were.

The mineral region is differentiated geologically into four sections, — Highland Rim, Cumberland Plateau, Appalachian Valley, and the Ashland Plateau. In the first, one "rides fetlock deep in brown ore"; in the second, one comes upon that famous one-hundred-mile range of iron ore known as Red Mountain, and traverses also the two great coal fields, the Black Warrior and Lookout Mountain. In the third section, the Appalachian Valley, are the long reaches of the State's other two great coal fields, the Coosa and the Cahaba, and more brown ore, while in the Ashland Plateau are riches of many sorts and kinds, — a very maze of mineral riches running wild. These plateaux and valleys trace a diagonal line across Alabama from northeast to southwest, giving to this portion of the State a gradual sloping toward the Valley of the Mississippi.

Jagged and picturesque, this mineral belt runs midway between the Grain belt at the North and at the South, the Cotton belt (or the canebrake, part of the Gulf Plains), while at the extreme southern end of the State winds the belt of the Long Leaf Pine. In the Mineral belt, the ten thousand square miles of Hill Country, there are, all told, twenty-eight counties to travel through, only a few of which belong, however, to the records of pioneer days.

The significant cities now in a history of Alabama are for once not Mobile, Montgomery, and Huntsville — those long-established three; but rather Greater Birmingham and Anniston, Gadsden, and Sheffield, the new young cities beginning now to take their place in the world's work. Birmingham is less than forty years old to-day, and yet it has, together with its environs, recently merged into Greater Birmingham under the King Bill (Ensley, Pratt City, Thomas, North Birmingham, Woodward, Gate City), a population of one hundred and fifty thousand souls.

In his recent tour of the country President Taft said that he usually thinks of Birmingham as one of the group of cities,

like Atlanta, Pittsburg, Chicago, Minneapolis, Seattle, and Los Angeles, — that does things. Said he:

"Birmingham, because of her cosmopolitan character and because she is becoming more and more aware of how close she is to the North and how close she is to the entire country in a business way, is influencing the South, as the North is influenced toward her, to believe that this country is ceasing to have sections — not ceasing to have traditions. And there is a distinction I would like to make as emphatic as possible.

"I would not have the South give up a single one of her noble traditions. I would not have her abate a single bit of the deep pride she feels in all her great heroes that represented her in that awful struggle between the North and South; but I would have the whole country know, as I believe the South is growing herself to know, that it is possible to preserve all those traditions intact and have a warm and deeply loyal love of the old flag to which she has come back, and to know that the North respects her for those traditions she preserves, and does not ask her to discard one; but only wishes to unite with her in the benefits of a common cause, and of a sympathy and association between the peoples of the two sections that will certainly lead us on to a greater and greater future."

Now, Birmingham — this winged activity bred out of the ashes of war's waste — has a history that is in a way a great story. To begin with, it had, back of its conception, the sincere spirit, for its founder, John T. Milner, a public-spirited civil engineer, was a distinctly patriot sort. His city, conceived for a great workshop town, was deep answer to the State's need of those times. The story of its battle for existence is given in minute detail in these pages, and it is shown how at length the coal and the iron captains marched it along to victory. The strong trio at the lead in the pioneer days of the Birmingham District — Henry F. DeBardeleben, James W. Sloss, and Truman H. Aldrich, and their associates — have done a great work for Alabama.

And full of what zest for it all they were! Hear Colonel DeBardeleben: "I 'd rather be out in the woods on the back of a fox-trotting mule with a good seam of coal at my feet than be president of the United States!" And again: "Ah," he says, "there 's nothing like taking a wild piece of land all rock and woods — ground not fit to feed a goat on — and turning it into a settlement of men and women; making pay rolls; bringing the railroads in; starting things to going. . . . Nothing like

boring a hillside through and turning over a mountain! That's what money's for! I like to use money as I use a horse to ride!" And he rode — good sooth! (*"Ça, ha! le Pegasus qui a les narines de feu!"*)

He set the town just lifted off the verge to going at the pace that killed. Not just "millions" now, but "billions in it!" Surely it was a game of Follow My Leader — and a high old game indeed. When struck by the cloudburst of 1893, however, it fell sheer over the precipice and down to the bottom. . . .

As for all the rest that followed it is told here, — up to the very time when the panic of 1907 strikes the South and the great company around which the whole mineral region swings, the Tennessee Coal, Iron, and Railroad Company, quivers on the verge of collapse; and there is lifted out of the chaos a Titan's hand, — the hand of John Pierpont Morgan (the one-man power again back of industrial events — this time of a nation, not a State), — and the Tennessee Company is merged with the United States Steel Corporation, and is lifted out of Wall Street for good and all. Certainly the capitalists of the world are aware of the ground they are planting in.

Only in the present day do the visions of the pioneer workers of Alabama begin to take definite form and shape. Birmingham is now conservative grown in some degree, is at any rate shy of the "grand stand," and wary of the cry, "Millions and Billions!"

At a recent meeting of the International League of Press clubs at Birmingham John Sparrow[1] gave this fine-spirited description of the young city:

"The visitor is quick to sense the spell which Birmingham casts over its citizens.

"It is the grip of a drama wherein expectation is never cloyed, and suspense, though sometimes poignant, is tempered by the intuition that forces are moving in an orderly way to a splendid climax.

"The Birmingham man himself is unconscious of this appeal to his dramatic instinct. He will tell you he had rather live in Birmingham than anywhere else because things happen naturally here, there is no forcing of effects, no theatrical clap-trap, none of the fireworks with which some other cities he has in mind are wont to usher in their star events. Developments come, he holds,

[1] Mr. Sparrow, scholar, philosopher, and newspaper man, was formerly connected with the leading papers of Montgomery and Birmingham.

because they must — slowly or quickly as they may, but inevitably. What are a few months or a few years to a city whose place on the map is permanent, and whose future a century hence is as assured as if it were the total of a simple sum in addition? There is iron ore in the mountains and valleys to last longer than that, and coal enough hard by to melt it and feed furnace mouths on land and sea besides. The steel problem is worked out, and the building of more furnaces and mills and factories are matters of detail. Why, then, should he boast and cram statistics down the throat of his guest?

"If you ask him for figures as to iron and coal and steel he will tell you those which have been published are approximately correct, but absolutely accurate data as to resources and growth are unattainable — it is impossible for any one man to know his Birmingham thoroughly. In the lockers of the iron and coal corporations are secrets as to supply and cost of production which would astound if revealed. Manufacturing plants spring up overnight, as it were, in out-of-the-way places, avoiding rather than courting notice. Storekeepers swing their signs in by-streets without blast of trumpets. And thus it is in all lines of activity; the note is spontaneous, the energy is inward rather than diffusive. The record, to be authoritative, would have to be revised daily.

"Birmingham, he will assure you, is the most evenly developed city of its age in the South, if not in the United States. It is a great mining camp, if you will have it so, Pittsburg in embryo, if you like. But as the center of the cotton belt, so demonstrated by geography and ginners' figures, its commercial importance is becoming more insistent. Its jobbing trade has a radius of 500 miles, and the volume of its retail trade is larger than that of any other city between Cincinnati and New Orleans. The power of its banks is felt in all adjoining States. It is the best produce market in the Gulf country. It is a second Philadelphia in the number of its home-owners.

"And as a last word he will tell you the Birmingham you see is but the nucleus of the Greater Birmingham soon to be, with its population of 150,000. And beyond that is the Greater Birmingham of the ultimate future — twenty miles long as the crow flies, hilltops covered with homes and the narrow valley between crowded with furnaces and factories and the sundry physical embodiments of industry and traffic. And any engineer can see with half an eye, that here is cast the mold of a great city, whose filling in is to be the work of generations.

"Thus is voiced in some measure the spirit of Birmingham — progressive, yet not without a certain kind of serenity, the serenity which comes from a supreme confidence in the future. A broad and tolerant spirit, and singularly appreciative. He who can do things gets his deserts and a little more in Birmingham; that is why it is the young man's town. And yet the sense

of proportion is stronger here than in many communities. The newly-arrived newspaper worker may challenge this statement by pointing to stories in the local press told in a couple of sticksfull, which could be spun into columns with flaring heads. The truth is, big events are commonplace here, so quickly do they tread upon each other's heels.

"Remember, the drama will not be played out in a handful of decades. It is to run into the long years. Wherefore it is wisdom to accept the acts of the day at their proper present value and future significance."

Although giving the main facts of the coal and iron business of the Birmingham, Sheffield, and Anniston districts, an outline of the entire mineral region, and the history of every company of importance, this book is, after all, mainly a book about men, — such men as have translated their ideas into mines, furnaces, steel plants, great companies and corporations, railroad systems, and the workshop towns and cities of the South. They are not thought of here as "coal barons," "steel kings," "railway magnates," and the like, but simply as plain, every-day, normal business men. And personal qualities are first and last.

According to Professor William James of Harvard College, the end and aim of all the higher educational and university training of the present day is, when all is said, simply "*to know a good man when we see him.*" Nothing better than that has ever been evolved out of modern college ethics. To follow Dr. James further: "*The feeling for a good human job anywhere, the admiration of the really admirable, the disesteem of what is cheap and trashy and impermanent — this is what we call the critical sense, the sense for ideal values. It is the better part of what men know as wisdom. . . . To scent out human excellence . . . to divine it amid its accidents; to discern . . . just what types of activity have stood the test of time.*"

One takes high place in his community (in these pages) rather more by the measure of his amount of personal force, good sense, and labor than by the amount of dollars he has amassed (a perfectly outlandish point of view, Mr. George Bernard Shaw would undoubtedly exclaim). Something, indeed, is essayed here beyond "The Story of Billions," and "How a Millionaire is Made."

A redundancy of colonels might possibly be urged against this history. That the colonels are in the book cannot be denied. But then — so are they in Alabama and in all her sister States;

War Department records both Federal and Confederate to the contrary notwithstanding. This particular title is now exactly as it used to be, distinctly reserved in the South for the man of estate or of achievement — or both — in the walks of civil life. While it is perfectly true that certain of the present-day leaders of the Birmingham District — George B. McCormack, George Gordon Crawford, and Frank Nelson, Jr., among them — have up to date escaped the honors, it is merely a matter of time before they, too, will succumb to the inevitable.

Further, it may be said that the romantic and the picturesque are given too much account of in a subject comprehending such a wide maze of technical and industrial fact and circumstances. But it is a mistake to divorce the business world from all the historical and really charming association properly belonging to it. Fact and romance walk hand in hand. One is of just as much importance as the other, and if the light of true vision be turned upon them they can never be torn asunder.

So this, indeed, is not a book at all, — only the Hill Country talking to you and me. Come, therefore, miles and miles out in the coal fields and listen with your ear to the ground. Go, sit on an old stump as DeBardeleben does, and paint you pictures out of your own head . . . see towns rise! Or get off in the woods, around St. Stephen's Bluff, or in a houseboat on the Tombigbee, own comrade with Eugene Smith and Truman Aldrich, and read the story of the rocks with them, and go a hunting up some old lost silver mine they say the Indians worked!

Do anything but sit in a ceiled room and read a printed book. Listen to Friend Aldrich speak: "Man is a humbug! Have I not told you over and over? Man is an ass! Man is a creature to be led by the nose. Pull the wool over his eyes . . . stuff the cotton in his ears . . . he's easy . . . easy!" . . .

Lo, now! . . . the cotton and the wool! Be easy! Follow, now, with me. Trace a dim and all but obliterated trail to the ruins of some old stone furnace forgotten in the forest. Come, mount a little bridle path leading to Red Mountain, and while we ride together, you and I, let us listen to the story that Alabama tells — an old, old story — old as the hills — yet as fresh as the morning!

ETHEL ARMES.

Birmingham, Alabama,
December, 1909.

THE STORY OF COAL AND IRON IN ALABAMA

THE STORY OF COAL AND IRON IN ALABAMA

CHAPTER I

THE PLANTING OF THE SEED

Beginning of coal and iron business of Alabama. Origin of first iron workers. Organic relation to State. Diversified character of activities. First iron used imported blooms. Tradition of initial service of native iron ore. Indians in possession of country. Highly organized temperament of ancient tribes. Adverse circumstances of later day confronting frontier settlers. Pushmataha quotes General Washington on need for mechanics and tools of industry among Indians. Tombigbee District root ground of institutions of State. Fort St. Stephens, first depot of iron supplies and headquarters of artisans. Biography of Benjamin Hawkins. His progressive attitude towards Indians. Early smiths at Fort Toulouse. Incidents of Bienville's old trading post. Feeble hold of French and Spanish. The great myth of Alabama. Picturesque facts and traditions of Indian origin. Naming of coal fields. Iron ore of Red Mountain as war paint. Ancient festivals of Valley region. Significant background of Birmingham District.

IN the mists of the early nineteenth century, when Alabama was an Indian world, the seeds of her coal and iron business were planted. Sown in the wilderness by frontier blacksmiths these two great allied industries — ever close kin to mother earth — were lit during the first years of their growth by the dying Indian fires. Viewed in the light of these fallen embers and with poignant sense of the far geological cycles stretching back into the infinite dark beyond the history of human kind, mine and forge, furnace, mill, shop, and foundry stand out on a vast horizon line.

The sturdy figures of the old toilers tramp by with swinging stride early in the dawn and blaze the way for the iron masters riding hard after them. The spirit of the romance of adventure that is in the beginnings of all things, to some, at least, of the

men who do the dreaming of empires and the pioneering thereof, quickens the young day's planting from dawn until dark.

The first recorded incident in the making of the coal and iron business of Alabama belongs to the last decade of the eighteenth century when, at the instance of the United States Indian Agent, Benjamin Hawkins, a crew of blacksmiths was sent to the Creek Nation in lower Mississippi Territory. Together with a number of other smiths, machinists, and wagon-makers, belonging to Andrew Jackson's brigades and mustered out after the War of 1812, these frontiersmen made up the first body of the pioneer coal diggers and iron makers of the State. On the ground before the geologist, they were the original explorers and the discoverers of a large portion of the mineral fields.

Straight to them and their crude workings all the back tracks of this history lead. They, their sons, and their grandsons did significant work during the frontier and territorial periods and the first years of statehood to help Alabama learn to carry her own weight from the industrial standpoint. For among them were not only coal miners, forge, furnace, and foundry builders, but also millers, carpenters, tanners, shopkeepers, mechanics, cotton-gin makers, lumber men, boat builders, railroad contractors, and surveyors.

To shoe horses, mules, and oxen was only incidental in the daily labor of the frontier smiths. They furnished the first settlers of Alabama with ways and means to conquer the wilderness and to create and maintain permanent settlement. To begin with they made and repaired weapons for the hunt and for defense against the Indians: guns, rifles, knives, and pistols. They turned out every sort of farming tool and implement: axes, plow-tips, harrow teeth, shovels, fire tongs, plow stocks, spades, cow-bells, and picks, besides wagon tires, bolts, nuts, and hinges. They also fashioned a great deal of "hollow ware," as the domestic and kitchen utensils were termed: bake ovens, huge iron pots and cranes, frying pans, skillets, "dog irons," flatirons and firebacks. Moreover, every smith was a farmer and a soldier, too, and a goodly number of them were descended from men who fought in the Revolution.

By the year 1819, when Alabama was admitted to the Union, there was not a community in the State without its blacksmith shop and its hardy frontier man-of-work. It was in blacksmith shops as well as in log churches that the first judicial courts of

Alabama held session. Indeed, a blacksmith shop existed before even a church was founded, that is to say, in the English-speaking communities of the territory. For in the year 1798, in among the cabins of the old Indian town of Took-au-bat-che on the Tallapoosa, "a smithy of logs at the public establishment" is mentioned by Benjamin Hawkins in his "Sketch of the Creek Country," while at Fort St. Stephens a government blacksmith shop was put up in 1801 and a depot of iron supplies was established there two years later in an old Spanish blockhouse. In the city of Birmingham, founded some three generations later, the first shack built was a blacksmith shop.

Iron used at the start by the frontier smiths was necessarily bar iron and blooms imported from England and Sweden, and, according to John S. Glidden, a St. Stephens blacksmith, it was steered up the Tombigbee River from Mobile or carried to the fort by pack mules.

The earliest use of the Alabama iron ore itself was, on the count of a tradition general throughout the hill country, to shoe the horses of Andrew Jackson and his men when, at the call of George Strother Gaines in behalf of the Indian assailed settlers, "Old Hickory" came, wounded as he was, but with gun, sword, and grit, over the Big Bend of the Tennessee, with all his mountain men. A fair start surely for iron making, and having, too, a militant ring! For, indeed, the iron business had well begun, mailed for conflict, and looking to reverses. Destined to fight its way along, inch by inch, from the first, it was a long and bitter struggle against as heavy odds as ever beset any industry in old world or new.

When the first crew of smiths, Colonel Hawkins' men, came south, Alabama was held neck and crop by the Indians: Cherokees and Chickasaws in the rich-forested hill country to the north; Creeks and Choctaws midland in the long, green, swooping valleys, the cane-brake plains, and the river lands, and down among the sands and pines of the southern reaches, in and around the scant white settlements along the Tombigbee. At the land's end cringed the Spanish, whined and complained the futile French.

Alabama, later than the other southern States to come into the grip of the English settlers, was the last possession of the Indians east of Mississippi and their most cherished one. "They loved their native land," writes Bancroft of the Chero-

kees, "and above all, they loved its rivers." Their towns and villages were built usually in the rich lowlands near the headwaters of rivers and by springs and creeks. There were elements of an odd and symbolic interest in the outer structure of those vanished communities, qualities, indeed, of rare sweetness and strange psychic sense, later lost. The houses were of pleasantly spacious dimensions and set upon mounds and terraces. The dwelling of the chief, always upon the highest ground neighboring the Grand Cabin of the Council, faced invariably the rising sun, in order that the chief might be daily reminded that even so must he awaken each morning and keep watch over his people, and be always aware of mounting strength with increasing years and of ever growing light. The house called Cabin of the Beloved Men, where slept the oldest leaders of war, of peace, and of public service, stood in an angle opposite the dwelling of the chief, and faced the setting sun, in order that it might be suggested to the old men that their lights go out quietly and they refrain from the chase and from war.

The condition of old age seems to have aroused among the Indians of early Alabama a feeling of profound devotion and reverence, attended, as it so often was, by a power of prophetic vision, by rare good sense, and in many instances an exquisite sensitiveness and noble sincerity. The houses where the old men lived were cloud white to symbolize the spirits of the honored men. The other cabins were stained deep red. All the towns were enclosed by high walls. In time of peace garlands of ivy leaves were placed upon the gate and walls, cabins, towers, and squares, and these were changed in time of war to long chains of hardwood rings. Temples were set apart in lonely places with fires in them always burning.

By the early part of the nineteenth century, however, the poetry was out of it all. Adventurers, soldiers, priests, traders, settlers of the French, Spanish, African, Scotch, Irish, English, and Hebrew nations had trodden the Alabama country from time to time throughout three hundred years; had charged the Indians, body and spirit, with alien bloods. And the tribes themselves mingled breed with breed until the clean-limbed unity of the early Indian of this portion of the South, such as the remnant of legend and story leads us to fancy De Soto rode into, — all that first fine primal shape, had been utterly deformed and destroyed.

At this precise period in which the seeds of the iron industry

were planted, there was going through the Muscogees Tecumseh's cry, "Be savages and you will be strong as the hurricane!" And they were savages, and there was war — no clean, plucky fights either, but a nasty sort, like a nightmare in the State's long sleep.

There are, however, some instances revealing the noble quality. At the time when the British war cloud of the years 1812–14 began to lower over the feeble Union, the chief Pushmataha stood up among his warriors to prevent their alliance with the English, against the Virginians, as all English-speaking emigrants were then named by the Indians of Georgia and Alabama. In recalling a visit he had once made to President Washington he said: "The delegation was received by General Washington as a father would receive his sons who had been a long time absent. He inquired into the wants of our people at home, telling us he would send us blacksmiths and wheelwrights to make for us the tools of husbandry, spinning wheels, looms, and other necessary articles, for it would not do for us to rely much longer upon the game of the woods for support. . . . He was a man, to be sure, but not like other men; he rarely opened his lips to speak without saying something useful to be remembered for the good of mankind, and especially for his red children."

That county of lower Mississippi Territory, out of which were carved so many others, of both Alabama and Mississippi, in the years succeeding this loyal word of Pushmataha, was honored with Washington's name. There were planted little log cabin colonies, stockaded farms, forts, and trading posts. There was uneasy sleep for men of these times. They huddled their families like frightened sheep; dared not close their eyes of nights and worked with the loaded gun in arm's reach. This went on for thirty years and more. Very few ventured as did Jackson's smiths. Every condition of the country was savage, altogether hostile to either the planting or progress of any industry or trade.

The section of Washington County most settled, and indeed the site of the first English settlement of Alabama, bordered the Tombigbee River and was named the Tombigbee District. It is heavy with history, packed with romance and incidents, for here was old Fort St. Stephens; and here during the British era every institution of the State took root. "Here were the pioneer settlements, the first courts, the first agriculture, the first trades,

the first schools, the first towns," observes that conscientious and discerning historian, Peter J. Hamilton. And, on authority of Benjamin Hawkins, Albert J. Pickett, Anson West, and John S. Glidden, here also were the first iron depot and the first machine shop.

The whole matter of it is traceable to the one man, Benjamin Hawkins, termed in a musty, old, unread book, "beloved man of the Four Nations." He it was who pointed out to Washington and Jefferson that agricultural interests might be set up and stimulated in the Indian world of the far South should blacksmiths be furnished to certain of the tribes to make the tools of husbandry. It was this suggestion, acted upon, that became a stipulation in various of the early government treaties with the Creeks and Choctaws. Though having no marked consequence for Indian progress it became one of the primal means by which the white men came at length into the land, to have and hold it and to reach out a long ways into the future.

As to Colonel Hawkins, he is an historical figure of some bulk in early American history. He was by birth a North Carolinian, by education a Princeton man of the class of 1777. Throughout his first three years at the university he made a specialty of the languages, French, in particular, which became the guiding stone to a good deal of what followed. Just as Ben Hawkins entered his senior year, the War of the Revolution was flaming out, and stepping into the field he was appointed directly on the staff of General Washington, acting in the capacity of interpreter. In the events succeeding the Revolution he stood well at the front in public affairs. Twice delegate to the Continental Congress, at the expiration of his second term, in 1785, he was appointed by Congress to negotiate treaties with the Creeks and Choctaws. At this time he doubtless got his taste for savage life. For after a few more years' service as United States Senator from North Carolina, in 1795 he was again appointed by President Washington on the commission to adjust Indian differences springing out of the former Creek treaty.

Later, Hawkins was appointed by President Jefferson as principal agent of Indian Affairs for all the tribes south of the Ohio River, and was accorded power to negotiate treaties, together with General Wilkinson and Andrew Pickens. It was a big country to oversee, but the task was all much to his liking. With a special faculty for acquiring languages, Benjamin Hawkins shortly be-

came conversant with various Indian tongues. He wrote in 1800, "A Sketch of the Creek Country in the Years 1798–99." The work indicates him to have been a direct, conscientious sort, observant of the physical facts of the country and the peoples about him; on the lookout for mill sites and practical advantages; sympathetic and sincere in the Indian's behalf. He was energetic too. "As business increased upon me," he says, "I found my mind and exertions always ready to rise above it." He never returned "back East" but grew gray in the service and died in the wilderness. One record gives 1816 as the date of his death, and the place Hawkinsville, Georgia. Another states this as the time of his resignation, and refers to a letter written by him to the War Department in 1825. His closing years seem to be lost in the forest. He came to have an especially kind eye towards his mongrel charges in Mississippi Territory and with Gaines and Wilkinson, an itching to see things move along towards civilization in the fresh, young, savage country.

There were Federal Government smiths quartered about 1800 at Tuskegee, an Indian village on the site of the old French garrison and trading post, Fort Toulouse, in what is now Elmore County. This spot is no more than thirty miles from Montgomery, the capital city of Alabama. Early as it then was in United States history, Fort Toulouse was a tale that had long since run. Put up by Bienville in the dumb forest in 1714, near a century before the Virginians trod its ground, it stood guard for France in the very region from which, eloquent and fragrant, the name of Alabama sprung. It was at best but a flimsy wooden fort. Within each of its four bastions there were mounted by the French two cannon. All that was left of the fort in 1793 were the cannon. Colonel Hawkins describes Tuskegee in that year thus: "The town is on a bluff on the Coosa, forty-six feet above low water mark; the rivers here approach each other within a quarter of a mile, then curve out, making a flat of low land of three thousand acres which has been rich cane brake. . . . There are thirty buildings in the town compactly situated. In the yard of the town house there are five cannon of iron, with the trunnions broken off, and on the bluff some brickbats, the only remains of the French establishment here."

The sole incident recorded in Pickett's history of a government blacksmith at this point is the filing away of the spikes that drove these rusty old guns to earth; the charging them to show

the Creeks what gun-fire meant, and, incidentally, what power was in the hands of a United States Government blacksmith.

Thus Fort Toulouse, passing from French and English, fell into Muscogee hands; thence, all but obliterated, it comes to the frontier blacksmith crew and at length to Andrew Jackson. Only a fragment of its story is to be followed here. Nothing but sorrow was permanently builded by either French or Spanish on Alabama soil. Apart from blood stain, all that is left of the memory of the *adelantado* is but faint blowing flower of legend and echo of a poem. The grasp of France, withdrawn, left but little impress save sweet and bitter memory. "The Frenchman knows no home but France," writes Peter Hamilton. "He may explore and influence a new world but it will be generations before he settles far from his fort on the sea, where vessels come from France. . . . On the Tombigbee as on the Nile the Frenchman opened the way, and the Englishman entered into his rest."

Fort Toulouse was founded in 1714 within the very decade of the naming of the Alabama River. This myth colors every story of Alabama ever told. Of a subtile and delicate texture, related by early historians as "fact," it is graven forever in the legend and the folklore of the State. A tribe of Indians in old Mexico, by name the Alabamas (*thicket clearers,* it has been found to signify not *Here we rest*), dared essay battle against Hernando Cortez and his men for Montezuma's sake, only to be vanquished. Under cloud of defeat, shivering, they crouched back; crept, forlorn, across the Rio Grande, and wandered up into the Red River country. They came upon the Muscogees at the salt licks in Louisiana and by a wanton killing drew on themselves the Furies' wings and beaks, the anger of the fierce tribe, sharp-taloned and relentless. How they were whirled then for their trespass by the stronger force, as withered leaves in teeth of a storm, moon to moon, until the pay was made! From south to north and north to east, then south again, to home ground at last and peace wrought by Bienville. And at this finding of home, at ceasing of the arrow darting wind and ever restless going, the tired chief, standing on the oak-shadowed bank of a river that wound to the sea, cried "Alabama! Alabama!" and struck his spear to earth. And it came to pass that the war staff of this fabled chief flowered in time in the name of river and of country, of State's motto and of State's great seal. Romance

THE BLUFF HOBUCKINTOPA
Site of Fort St. Stephens, territorial capital of Alabama

OLD ST. STEPHENS STREET SCENE

BOX-MAKER'S BLUFF, ON THE TOMBIGBEE
Site of old French fort and trading post

ROCK HOUSE IN SHADES VALLEY
JEFFERSON COUNTY

pure was thus elected from earliest source, and sent thrilling through the growing and exultant body of the wild young land.

One hundred miles southwest from Fort Toulouse, as the crow flies, just where the Alabama River leaps to meet her Choctaw mate, Tombigbee, there rose a tall limestone bluff, rugged and wild, called Hobuckintopa. Once a Choctaw man, tortured with a sudden and intolerable bodily ill, had leaped from the breast of this rock, his last harsh bed on Mother Earth, into the Tombigbee sweeping one hundred feet below on to the Mexican Gulf. The tragic act made so profound an impression among Choctaws that the bluff bore ever afterwards the name Hobuckintopa, a curious instance carried out of the dark of American primitive life, through countless generations to the present time.

At the time the French made a cantonment here, early in the eighteenth century, this bluff was given a Christian's name, no less a one than that of the proto-martyr himself, St. Stephen. And old St. Stephens became in 1817 the temporary seat of government of Alabama Territory.

Farther up stream from Hobuckintopa was just such another bluff at junction with a lesser flow of waters. In form it was a natural bastion, steep and impregnable, ivory-tinged, pale as moonshine, and crowned with black cedars. Here there lived from a time unchronicled an aged and solitary Choctaw, who gave the whole of his days and years to a vocation accounted by his tribe a sacred one, the delicate making of cedar boxes to hold the bones of his nation's dead. The creek that tumbled over the huge stones at the base of his dark-crowned citadel in its clamor for the bigger stream was named Tombikibi (box-maker's creek), Etomba-Igaby, Tombigbee, thus giving origin of peculiar and intimate nature to the name of the second greatest river of the State. This box-maker's bluff, fortified by the French twenty-two years after Fort Toulouse had been built, became Fort Tombecbe; under Spanish dominion, Fort Confederacion; while to-day all romance is effectually snuffed out by the American name of Jones Bluff.

Far away from Hobuckintopa towards the north, dim in the mist of a thousand hills, there lay the Hunting Ground of the Four Nations and their sacred place of annual feast and festival. Out of this remote and mystic region issued three great white streams, the Warrior that fed the Tombigbee, and the Coosa and Cahaba that fed the Alabama.

"Coosa River, spelled Cosa by the Spanish chroniclers, received its name from the ancient Creek town Coosa," states Henry S. Halbert of the Department of Archives and History of Alabama. "This town stood upon the east bank of the river, and was first visited by De Soto in 1540. It was not uncommon in Indian America for a town to adopt a name from the speech of some neighboring tribe, with which they had trade relations. Hence the etymology of Coosa must be sought in the Choctaw tongue, for there were in the Choctaw country several towns named Coosha, properly spelled Kusha, generally with a descriptive adjective suffixed. Kusha, of which Kusa is the Muscogee corruption, signifies *Reed brake*, evidently so named from the extensive reed brakes that existed in ancient times near this famous Creek Indian town.

"Cahaba River was very much in the debatable territory of the Creeks and the Choctaws. But if its etymology must be sought in the Choctaw tongue, I would say that it was worn down from (Oka aba), the first part (Oka) losing the initial vowel in rapidity of speech. Oka aba, signifies the *River above,* and the name may first have been given to this river by some Choctaw-speaking Indians living down on the lower course of the Alabama River."

In this region was also a curious and dominating hill of red rock that was to the Indians so precious of color and quality that they traveled for many miles to get it, coming even from across the Mississippi "as far away as the sun slept." It was their war paint and of use to them for dyeing. Even no more than a slight touch upon it and the hand was turned miraculously to the very color of the rock. And down in a deep-forested valley, over which this mountain cast its long shadow in the late afternoons was another treasury of Indian commerce and desire, a little bald gray bluff of some soft rock easily cut and molded with pointed flint stones. This the Indians carved out and turned into pipes, bowls, wedges, and mortars, so that the face of the bluff stood pitted as though scourged by smallpox, and the rains of many winters cut it too into a labyrinth of tiny caves and wells. Over across another wider valley (later to be named Jones Valley), where the hill of rock cast short shadow in the early morning, there rolled that vast swell of ground called the Field of the Black Warrior, after the river named for the early Indian hero Tuskaloosa who had dared to fight the *adelantado.* Through all this region the men of the Four Nations stalked their game, and they drew down many a sapling on which to dry the skins of the bear and deer.

Of their various annual festivals celebrated in the valley was that of the welcome to the Spring. Always in Alabama the footstep of the quick young Spring is heard before Winter has reached old age. And in the hill country even, the ground makes ready before time its delicate embroidery of flower and leaf. Thus in the early Indian life preparations for the welcome would be made in latter February. A big, fine-modeled buck with royal, branching antlers, a sire of the herd, would be slain and his hoofs and antlers polished. Then the finest grain and fruit of the winter planting would be packed into the body and the deer borne out in procession to a plain in the valley's center, and placed as if alive upon four tall posts.

Precisely at sunrise of the day corresponding with them to our March first the worshiping Indians assembled, knelt in a vast circle about the consecrated deer, and lifted up a prayer to the sun. Their prayer was that the children of the forest be granted in the coming harvest just such an abundance of fruit and grain, fat and rich, as was there sacrificed.

With the dawning of the nineteenth century the hill of the wine-red rock was found to be a mighty range of iron ore, the greatest ore range of the South, iron to the dark heart of it, while the field of Tuskaloosa, the Black Warrior, and the valleys of Coosa and Cahaba turned out to be pregnant with coal. The first blacksmiths found out these iron and coal resources and in time made use as they needed, taking thimble measure of the buried riches. The hill of red ore was early called Red Mountain, and in the year 1871 the city named Birmingham was founded in the valley of limestone, called Jones Valley, between the magic hill of iron so treasured of the Indians and the Warrior Field of coal. In the valley on the other side, called Shade Valley, or Valley of the Shades of Death, where stands the little castellated limestone bluff known as the Rock House, two furnaces with big rough stone jackets were put up in the Civil War time. The one just above the Rock House, called Irondale, is now farm land; the other, some miles below the Rock House, Oxmoor, is owned to-day by the Tennessee Coal, Iron and Railroad Company. Throughout the region, savage, sweet, and deeply-wooded still, are sometimes found big sharp-elbowed trees, those that were bent, they say, when saplings, by the Indian hunters, and many an arrow head is to-day unearthed in this ground, known now to all the world as the great Birmingham District.

CHAPTER II

RECORDS OF EARLY GROWTH

Trading post established at St. Stephens. History of romantic fort. Old Spanish blockhouse serves as depot of iron supplies. Sketches of St. Stephens blacksmiths, Tandy Walker and John S. Glidden. Wide importance of work. First shops at Mobile. Negro blacksmith-scholar of Tuskaloosa. Abandonment of St. Stephens. Mt. Vernon arsenal second depot of iron supplies. Founding and growth of Selma. Present day appearance of forsaken capitals of Alabama. Site of Fort Toulouse headquarters of Andrew Jackson. Folklore tale of surrender of Weatherford. "Old Hickory's" commander of scouts settles in brown ore region of Franklin County. Group of men of War of 1812 and their descendants associated with coal and iron records of South. Discovery of Coosa and Cahaba coal fields. Original ownership and interesting anecdote of certain properties owned by present day corporations of Birmingham District. List of smiths of early Alabama. Theodore Roosevelt's word for the laboring man.

A GOVERNMENT factory or trading post was established at Fort St. Stephens by General Wilkinson in 1803 in order to bring about good feeling and more friendly commercial relations between the frontier settlers and the Creeks and Choctaws. The rugged bluff Hobuckintopa had been fortified in 1792 by Spanish troops under Antonia Palaas, when a one-company post was established, and barracks, blockhouses, commandant's residence, officers' quarters, church, and rectory were built. The blockhouses, of more robust construction than the quarters, were, like the church, timber frame work stuccoed with clay, and, like the remainder of the buildings, were roofed with cypress.

When the United States boundary line was determined by Ellicott's Survey in 1799 General Wilkinson sent United States troops under Lieutenant McLeary from Natchez to take possession of the Spanish fort. The American flag was then saluted for the first time on Alabama soil, and the Spaniards stepped back, sullen, to Mobile.

Little by little there began to rise in the country an ardor for Spain on the part of the Indians, fed from the hidden and treacherous sources in Mobile. It threatened indeed to become

an overflow boding wide disaster and the drowning of every American interest in this quarter of the Union. General Wilkinson therefore located the government factory at St. Stephens to serve as a dam. In a section of one of the Spanish blockhouses used as a general store the supplies for the early smiths — bar iron and blooms, many tools and implements, guns and ammunition — were stocked. One of the government smiths, Tandy Walker, was in charge of the government blacksmith shop placed at this point in 1801. Walker does not appear to have spent much time over the anvil; he would far rather roam the forest. According to the early local historians, this frontier smith figured in many exploits and events of adventurous flavor. Could a Leather-stocking Tale be essayed, Tandy Walker were a subject to hand. Excerpts from his biography written by Rev. Anson West in "The History of Methodism in Alabama" must suffice.

"Among all the men whom Mr. Matthew P. Sturdevant found in the Tombigbee country there was none of more conspicuous character than Tandy Walker. He was by birth a Virginian, by nature and experience a backwoodsman, by trade a blacksmith, and by acquired knowledge of the Indian language a medium of communication between the English-speaking and the Indian-speaking people. He emigrated to Tombigbee by or before the summer of 1803. Some have said that he went to the Tombigbee in 1801.

"The United States Government was exceedingly anxious to civilize the Indians and improve their condition, and to this end endeavored to introduce among them implements of husbandry. In some of the treaties made with the Indian tribes the Federal government stipulated to furnish them blacksmiths. . . .

". . . Tandy Walker was summoned to serve on the juries of his country, and was employed and sent on most delicate and complicated missions. He was sent on expeditions in which caution, daring, endurance, insight, and wisdom were all in requisition. In 1812, upon the suggestion of Mrs. Gaines, the wife of George S. Gaines, the government agent, and upon the promptings of his own noble and generous impulses, Tandy Walker went to the falls of the Black Warrior River, about where Tuskaloosa now stands, to rescue or ransom a Mrs. Crawley who had been captured in Tennessee and brought to that place by a party of Creek warriors who had been on a visit to Tecumseh on the lakes. This business Mr. Walker transacted with success. In 1813 he went on some perilous expeditions for inspecting the situation and ascertaining the movements of the Creek forces which beleaguered the white settlements. . . . Southeast of the

present town of New Berne and in Township eighteen, Range six, is a noted prairie, marked on the maps as Walker's Prairie, and said to have been so called for Tandy Walker, and not far from that prairie, on the west side of it, Tandy Walker died in about 1842. His grave is there till this day."

Tandy Walker's successor at St. Stephens was an English blacksmith and machinist, John S. Glidden. Glidden had served an apprenticeship in Devonshire and knew every detail of the trade. He ran away from home very early in the century that "he might come to see American Indians." The schooner in which he took passage was bound for Mobile. Here the Devonshire lad got a canoe and in time arrived at Fort St. Stephens. This was between the years 1811 and 1812. Young Glidden found at St. Stephens that all the settlers were using wooden hinges for their gates and doors and wooden pegs for nails, so he seized the opportunity for making nails, hinges, and nuts. As soon as he acquired the government shop there "he made any number of plows, hoes, dog-irons, pot racks, fire shovels and tongs, and everything in the way of iron needed for building houses, wagons, buggies, carriages, now turned out by machinery. He also made cowbells, a new thing." [1] Mules and horses were brought to the shop at St. Stephens from everywhere within a hundred-mile radius, and guns were brought for repair from all quarters of Mississippi Territory. In 1814 young Glidden enlisted in Andrew Jackson's mounted brigade and fought in the battle of New Orleans. After the victory he returned to his smithy at St. Stephens.

By the year 1816 there were fifteen hundred inhabitants at St. Stephens. Much money was invested, diversified industries were set afoot, and the place became, at the time of the division of the territory from Mississippi, the most thriving settlement of the English-speaking colonists in the Alabama country. "St. Stephens began a new era in our national history," Hamilton says; "she has stood for things that come nearer our hearts to-day." The little territorial capitol was, however, "doomed to early desolation." The meeting rivers, Alabama and Tombigbee, breathed death-dealing mists upon Hobuckintopa. There was never-ending fear of Indian massacre. The blacksmith Glidden said that in addition to his work by day he was forced

[1] Data obtained from John J. Mitchell of Birmingham, Ala., nephew of John S. Glidden.

to mount guard by night to keep the Indians off. He saw too much of American Indians at length.

Mobile being by this time opened up to the Americans by General Wilkinson, Glidden felt that the makings of a town were more certain at that point and safety more assured. He therefore packed his tools in a dugout and paddled down river to the Spanish town. He put up a smithy near the location where the Battle House was afterwards built on Old St. Francis Street and grew up along with the town. Buying a slave, he trained him to the business and gradually developed a big trade, so that by the thirties Glidden owned considerable property and a large number of negroes, each of whom was a well trained machinist. It was therefore, according to all accounts, John S. Glidden who furnished the State with the first skilled negro blacksmiths. Sir Charles Lyell, in his "Travels in the United States," in 1846, mentions a well known character of Alabama, a negro blacksmith, Ellis by name, "who had taught himself Greek and Latin," and the English traveler continues, "He is now acquiring Hebrew, and I was sorry to hear the Presbyterians contemplate sending him as a missionary to Liberia."

Glidden carried on a big amount of plow and dray work in Mobile. He also made the iron work used on the first steamboats that plowed the waters of the Alabama and Tombigbee. The English workman seems to have become a thorough-going American patriot. "He loved a picture he had of Old Hickory up to the last," relates his nephew, who joined the old smith in 1856; "he kept it hanging in his office all the time. I wish I had that picture now myself!"[1]

When the Civil War broke out Glidden's young nephew enlisted in the twenty-first Alabama. "Too hasty, boy," old Glidden said, "you're too hasty. No call for your doing that." But it was in the blood! When Mitchell's regiment was stationed at Fort Morgan, he was detailed to the State armory to make gun locks. He was found to be so expert that his commander said, "You're worth any three men in the field," and transferred him to the Confederate Navy Yard at Selma. At the

[1] An incident of the battle of New Orleans related frequently by Glidden was: "One of the men there who owned a large number of the cotton bales which Old Hickory ordered for breast works kicked about giving them up. Old Hickory had him marched up before him. 'Ye don't want to loan us yer cotton bales, eh?' and he got him a gun. 'By the Eternal,' he says, 'stand up there an' defend 'em!' and he made the cotton man fight, too, along with us all."

surrender Mitchell was detailed to Mobile to repair the *Morgan*. She had been shot on her water line. "I was the last blacksmith in the Confederate service to put out my fire," says Mitchell. He packed his tools then and went back to his uncle who died soon afterwards at a good old age.

St. Stephens was gradually deserted by all her tradesmen and workmen, for the same reason that John Glidden left. One by one its houses were abandoned and its citizens departed. Destruction roamed about it, wild-eyed. Its forsaken homes were set on fire by the very people yet living near them, "to see them burn," says Mary Welsh in her chronicles. Before long only the cellars and broken foundations, toppled chimneys and ruins of several hundred houses, remained with the rows of trees grown big-bodied and mighty along the streets leading to the river. Once there had been a theater there. Balls, too, had been given there, but Miss Welsh tells us there was never a church, the Spanish chapel having been turned into a skin-house, and only on rare occasions was there a minister. To certain of the more fanatic of the early disciples of Lorenzo Dow, St. Stephens was as a Sodom and Gomorrah, was asserted, indeed, "to be doomed on account of the godlessness of its citizens." And as testimony, forsooth, the ballroom and the little theater spoke! Maligned little French dreams!

Nevertheless, as Peter Hamilton concludes, "St. Stephens did not die; she was translated. Her people, her trade, her very houses moved down below Ellicott's stone to the new frontier. Mobile did not outstrip her. St. Stephens took possession of Mobile and Americanized her. That Mobile is not now a stagnant Latin town she owes to St. Stephens."

The little depot of iron supplies, tools, guns, and ammunition, was eventually transferred to Mt. Vernon arsenal. This point was originally the landing place of Fort Stoddard on the Tombigbee. This fort, which was merely a stockade with one bastion, had been constructed in 1799 by General Wilkinson's order as, in a sense, a bulwark to Fort St. Stephens when that position was occupied by the United States troops. Stoddard was garrisoned by two companies of United States infantry, and Captain Shaumberg was detailed by Wilkinson to act as commandant. It is of Captain Shaumberg that the incident of the "Linder-Johnson wedding" is related. In the absence of ministers in the land, one Christmas night there came to the post a runaway pair full

Old French Cannon

Brought under Bienville's direction to Fort Toulouse, 1714

A Smithy in the Long-leaf Pines

"Uncle" Nat's Corner on Republic Iron and Steel Company's Land

The Piney Woods Express

Hauling timber for charcoal in antebellum days

of faith in the power of the United States Army. The captain, nothing loth to wear that power, stood up and married the pair, saying: "I, Captain Shaumberg of the Second Regiment of the United States Army and Commandant of Fort Stoddard, do here pronounce you man and wife. Go home, behave yourselves, multiply and replenish the Tensaw country." And the two were avowed "the best married folk in that region."

As early as November, 1811, a cantonment was established at Mt. Vernon Landing by Colonel Thomas H. Cushing of the Second United States Infantry, who, under General Wilkinson's orders, marched with his troops to protect the Spaniards, on this peculiar occasion, from American attack. The cantonment was discontinued at the close of the War of 1812. An arsenal was established by the United States Government on the first day of the New Year, 1829, on the site of this old cantonment.[1] Lieutenant Walter Smith of the First Artillery acted as commanding officer, and under his direction there were built storehouses, workshops, barracks, and officers' quarters. Lieutenant Smith retained command until 1832. Between 1835 and 1836 twelve hundred young men were mustered in at this point to fight in the Creek War under General Jessup. All these volunteers later received land warrants for their service. Among these young men was John W. Cobb, whose son, R. W. Cobb, became Governor of Alabama and was at one time interested in a minor way in the iron business.

Mt. Vernon was occupied as a post for United States Artillery men continuously from 1829 until the Civil War. The point served also as an American port of entry and headquarters of the first Court of Admiralty held in the Gulf States. During the Mexican War it was used as a general depot of supplies for the troops in the field, and at the close of hostilities a number of Mexican guns and ordnance of curious old Spanish make were brought to the place and young Captain Gorgas, later chief of ordnance of the Confederacy, was detailed in command. On January 4, 1861, Mt. Vernon was seized by volunteer Confederate troops from Mobile acting under instructions from Governor Moore. Here the Thirty-sixth Alabama Infantry Regiment was organized and equipped. After the fall of New Orleans the machinery and all the paraphernalia for iron making at Mt.

[1] From an historical compilation made for this work from the official records on file in the War Department and from scattered data in various of the Alabama histories.

Vernon were removed to Selma as will be related in subsequent chapters on the war period. Mt. Vernon was retained as a minor storehouse and point for supplies, but its sword was broken, its connection with affairs military permanently closed. Years later in the old barracks there, Geronimo and his band of Apaches were held in captivity. Afterwards the place became what it now is, a hospital for the negro insane.

An incident of particular interest occurring shortly after St. Stephens was made the capital of Alabama Territory was a certain real estate venture of William Rufus King who later became vice-president of the United States. Mr. King's home was in the little town of Cahaba, a settlement located on the site of the Indian village Piachee where, according to tradition, De Soto and Tuskaloosa had first met. After several years' absence abroad where Mr. King as a member of the United States Embassy Corps had been stationed at Naples and at Saint Petersburg, he returned to his Alabama home about 1818. One of his various enterprises was the formation of a land company to build a city. He bought a tract of land some three miles square, ten miles from Cahaba, and on higher ground, one hundred feet above the Alabama River. This point, known at the time as Moore's Bluff, was formerly called High Soapstone Bluff.[1] It was settled in 1810 by Isaac Moore. Considering the place as an excellent site for a town, Mr. King staked out the little plateau into lots for sale. Being of a scholarly turn of mind and just at that time profoundly enthusiastic over the poems of Ossian, he chose the name Selma out of this book for his little town. Once the ancient capital of Fingal, the most cherished home of the old blind bard — maker of the songs of Selma that haunt old Scotland deep and far — and having, moreover, the Greek meaning of seat or throne, to its founder's mind, it was a fair godmother for a city in the new world. St. Stephens as a capital was as short-lived as Alabama Territory itself, and Cahaba became the first capital of the State. In a short space of time the little river town in its neighborhood was made a seat of many industries. In later decades it supplanted Mt. Vernon and Mobile as a basis of iron supplies for Alabama and was made the main headquarters of the State for smiths, artisans, machinists, foundry men, mechanics, coal traders, and professional men as well as cotton men.

[1] Mrs. T. G. Kenan of Birmingham, granddaughter of Isaac Moore.

By main headquarters it is not meant to suggest that big outlines for the coal and iron business were drawn by Selma, for that has been the function of Birmingham. But Selma was large in comparison with its predecessors and sufficiently important in the way of iron works to call upon itself early in the sixties the sobriquet of the "Pittsburg of the South." It was during the war time, as will be detailed, that owing to the location at Selma of the Confederate Arsenal and Naval Foundry, Senator King's little town became the bull's-eye of the target, and its scope and value were attested to in the records of the military.

Of the early State Capital, Cahaba, there are but ruins at the present time, — a few solitary marble pillars, a statue near an artesian well, and one or two roofless houses with windows like blind eyes staring in the wilderness. And at old Fort St. Stephens there is nothing to-day. The bluff Hobuckintopa has reverted indeed to its tragic Choctaw sense. A century's growth has drawn over it the curtain of the wild forest. No one now living remembers the place but as a ruin. Her very cemetery has become obliterated; "her glory has departed. Pompeii is better preserved and more remains of Nineveh than of the capital of territorial Alabama." [1]

It was at the original quarters of the frontier smiths, Fort Toulouse, that, after the worst of the Creek business was over and done with, Andrew Jackson and his men pitched their tents. They rebuilt the ruined garrison; ran up the stars and stripes, and, in an enthrallment perfectly natural, surely justifiable, Andrew Jackson changed its name from French to good American, and called it Fort Jackson, in honor of himself.

Then came to pass that which is accounted the most tremendous happening of the Creek War — the surrender of Lamochattee, the Red Eagle, William Weatherford, that Muscogee half-breed chief, termed by Alexander Meek "the key and corner stone of the Creek Confederation." The power of this Confederation had now been broken by Jackson.

Weatherford's braves had been killed to a man. The story of his surrender, like the naming of the great rivers, Tombigbee and Alabama, is one of the hearth tales of the people of the South. Fact and fiction are entangled; its precise stuff is not fixed to the letter. It matters little, however, so the spirit stirs and its early, fine, sharp flavor keeps. One discerns here a simple,

[1] Peter J. Hamilton.

quite straightforward business such as Jackson has handed down as heritage to the men of Alabama and Tennessee, and to all the world beside.

This Scotch-Indian fellow, Weatherford, was keen for his blasphemed Indian gods and his outraged Indian rights. At daybreak he rode up to Fort Toulouse, — and he could ride, they tell, — a deer, fresh slain, hung over his saddle horn. He was full of concern for his dead tribe's women and children, who crouched naked in the stripped and blackened forest. Straight up to headquarters tent he rode, near to the broken old French guns where Andrew Jackson brooded.

"Is this General Jackson?" he asks: "I'm Bill Weatherford."

"I'm glad to see you, Mr. Weatherford," and Andrew Jackson rises frankly to salute the man that has been fighting him in such way as he liked to fight — in the open, with blood and bone, sun up to sun down, moon to moon.

"General Jackson, I've come in to surrender."

"I'm glad to hear that, Mr. Weatherford." A soldier near the marquee reports Jackson punctilious on the "Mr."

"I'm done fighting," and Bill Weatherford faces Jackson squarely. "My powder's gone. My men are killed. I can't call back the dead. Our women and children have got to be looked to. If I could fight you any more, I'd do it!"

"Kill him!" the cry fires the camp; the guns get primed.

"Halt!" commands Andrew Jackson, a war dog himself like Weatherford. "Who'd shoot a man like this would rob the dead! Put down y'r guns!" The camp is silenced. Bill Weatherford rides away. But the friendship thus begun on that day had no end in life.

The peace treaty of 1816 was subsequently gotten up, signed and sealed. The Creeks were permanently cut off from Spanish connection and conspiracies. One half of the middle area of Alabama was thrown wide open to American settlement. Immigration from Georgia, Tennessee, Virginia, and the Carolinas at once began to roll in like the sweep of a high tide. Thus, with Andy Jackson at the helm and James Wilkinson first mate, the country was soon placed in the way of being made Alabama Territory.

Of the men with Jackson, mustered out just after this affair, Major William Russell was one. He was Jackson's commander

of scouts; had seen service with him through Talladega, Emuckfau, and Tohopeka, and was, like his chief, a Tennessean. The major settled up in the hill country, among the Chickasaws, away to the north of the Tombigbee, in the county later known as Franklin. He got land from the Indians in a long rich valley. Following Jackson's little custom, which, like his grit, seems to have been catching among his men, the major named the country Russells Valley, and the nucleus of the market town he started there he called Russellville. His great lands skirted the edge of the Warrior coal field, and over them, miles on miles, one rode fetlock deep in iron ore. In this region mines are owned at the present time by the Sloss-Sheffield Steel and Iron Company and others. It was at the western terminus of Russells Valley that the first blast furnace of Alabama was put up, some years following the earliest settlement, and the first pig iron in the State manufactured.

Among the officers and men of the War of 1812, whose descendents became identified, in more or less degree, with the coal, iron, and railroad makings of the State and the upbuilding of the Birmingham District, were Joseph Rogers Underwood, Martin Tutwiler, Thomas C. Rhodes, Major Cowan, Luke Pryor, James W. Sloss, Jacob Stroup, John R. Gamble, Mathias Turner, John S. Glidden, John Hanby, Joseph H. Posey, and James, Edward, Achilles, and Jonathan Mahan.

Joseph R. Underwood's grandsons were William T. Underwood, and Oscar W. Underwood, United States Representative of Alabama. W. T. Underwood established the Mary Pratt Furnace Company in conjunction with De Bardeleben in 1883. Martin Tutwiler served in Virginia in General Cockes' command. His grandson, Edward Magruder Tutwiler, organized in 1893 the Tutwiler Coal, Coke, and Iron Company, now incorporated in the Birmingham Coal and Iron Company. Thomas C. Rhodes was Andrew Jackson's captain of engineers. The night after the battle of New Orleans he slept in the tent with Old Hickory.

Captain Rhodes' grandson, Rufus Napoleon Rhodes, founded the *Birmingham News,* of which sheet he is owner and editor to-day, and has been identified for over twenty-one years with affairs of the Birmingham District. Major Cowan was another of Jackson's officers. Cowan City, the Cowan Division of the Tennessee Coal, Iron, and Railroad Company's properties, lo-

cated in Franklin County, Tennessee, is named for him. Luke Pryor became one of the strong advocates for railroad construction in the South and represented Alabama in the United States Senate. James Sloss's son, James W. Sloss, was the second president of the South and North Railroad, and was one of the famous group, Milner, Sloss, Aldrich, and De Bardeleben, who established the first permanent and extensive industrial workings of the Birmingham District in the eighteen-seventies and early eighteen-eighties. The companies with which Colonel Sloss was associated, the Oxmoor or Eureka Furnace Company and the Pratt Coal and Coke Company, are owned at the present time by the Tennessee Company; while the colonel's individual iron works, the Sloss Furnace Company, is parent stock of the Sloss-Sheffield Steel and Iron Company. Jacob Stroup was the son of a colonial gunmaker, David Stroup. His son, Moses Stroup, built and operated furnaces in Cherokee and Tuskaloosa counties. Tannehill, once his property, is owned to-day by the Republic Iron and Steel Company.

John R. Gamble was the son of an Irish soldier of the Revolution, Robert Gamble, who was present at the surrender of Cornwallis. J. R. Gamble, mustered out of Jackson's army shortly after Weatherford's surrender, settled later in the wilds of Shelby County near what is Calera to-day, and married there. When the place began to show signs of settlement, he struck out for more woods. He took his family and household goods in a wagon across country up into what became Walker County. His son, Franklin Asbury Gamble, became, in time, county administrator, and later, judge of the Probate Court. He saw war service for the Confederacy and was the originator of the Jasper Land Company and stockholder and director in that concern and he originally owned the coal properties known to-day as the Gamble mines, operated by Pratt Consolidated Coal Company. Mathias Turner's son, James, became associated a generation later in the coal business of Walker County with Captain F. A. Musgrove.

As to those others of Jackson's fighting crew: Glidden's record has been detailed in relation to the St. Stephens work. John Hanby and Joseph Posey settled in the hill country near the locality known to-day as Blount Springs and Mount Pinson, where they put up blacksmith shops. Hanby was by birth a Virginian, born in Henry County, 1774, and was brought

up to follow the machinist's trade. Early in the century he emigrated, as so many Virginians did, to Fayetteville, Tennessee, and on Jackson's call for men in 1812, enlisted. There was a Gabriel Hanby elected delegate from the county of Blount to the Constitutional Convention at Huntsville in 1819. John Hanby following his trade right along, made what the young country needed and called for most at that time: knives, rifles, guns, and pistols, and brought up his sons to the business. He prospected around considerably and found a pocket of brown ore in the neighborhood of Oneonta. This rich find was years later acquired by Major Tom Peters, and sold by him to Henry F. De Bardeleben and Colonel Sloss, and named Champion. It was worked under contract for several years by J. W. Worthington and Company. It is still owned by the Sloss-Sheffield Steel and Iron Company and Tennessee Coal, Iron, and Railroad Company. Further operations of the Hanby family in the early coal mining done in the Warrior field are recorded in another chapter. The present superintendent of the Sloss Mines at Bessemer is Captain John David Hanby, great-grandson of the old machinist of Blount County.

The three Mahan boys and their comrades, following the good fight at New Orleans, split up into small crowds, "and," writes Kevin Cunningham Mahan for this record, "rather than tackle the job of running boats on the Mississippi up stream, they decided to follow the not any too safe Indian trails, or just strike out right up through the woods of Mississippi Territory in the direction the wild geese flew in the spring of the year."

One party of these soldiers was composed of eighteen members under the leadership of Major Jonathan Mahan, who was their "bell wether," so to speak. "Among them," states Mr. Mahan, "were James and Edward Mahan, and Linzeys, Fanchers, Massingales, Ragans, and Smiths. They made a compromise of trails and directions, and, after following what was known as the Tuskaloosa trail, took to the woods. When they reached the confluence of three creeks, those known to-day as Mahan, Shoals, and Mayberry creeks, which together make the Little Cahaba River, they found here an Indian camp well stocked with swine, horses, cows, and corn; also, says rumor, there were here a goodly number of comely Indian maidens, and not too great a number of bucks with highly developed fighting proclivities." Be that as it may, twelve of the soldiers of fortune, like Ulys-

ses of old, here laid down their arms, cast in their lots with the Indians and were not again heard of. The other six, together with a few Indians and traders, continued on their way to the Cumberland Valley for their wives and children. Returning with a small gathering of friends, they founded on the fertile site of the little Indian village the settlement later known as Brierfield, and gave to the broad-flowing creek the name of Mahan's Creek.

The hills ranging far and wide across country were deep then in long-leaf yellow pine, that rich growth of early Cahaba County, which has since given place to heavy marches of black-jack, hickory and chestnut trees, and clambering muscadine. The banks of Mahan's Creek droop with live oaks, cedar, and sycamore, yellow jessamine, and wild honeysuckle, yellow and red. Springs, at least forty in number, feed its course all along its way. Little wonder that it was so favored a place of the Indians. And here was the neighborhood of some of the earliest mills and forges of Alabama.

The foundations of the industry in these counties of Bibb and Shelby were thus laid as far back as 1815 by the Mahan boys. They were sons of old Major John Mahan, an officer of a Maryland regiment in action in the Revolution. Always a fighting clan, Irish to the core, they carried a gay spirit, like flag and drum, into the smoky hills and rough pioneer times of early Alabama. The old major emigrated to Tennessee at the close of the eighteenth century with his wife (who was close kin to General Winfield Scott) and their four boys. The blacksmith and wagon making business being at that period lucrative and useful in the growing communities, all four of the sons were bred to it. At the first chance for a fight under Andy Jackson, however, they quit for the time being. When they settled at length in the Alabama country, the old major came down with them. He died a few years later at a good old age. His grave is in the old hill cemetery on what is Joseph R. Smith's farm to-day, the precise site of the old Indian village and the early Mahan settlement. Major Mahan's name is recorded there on the lichened gravestone, and 1820, the year of his death.

The group of pioneers with their families lived first in wigwams, then later built log houses. All over this section of Bibb County are these log houses built in old Tennessee style and long abandoned.

Old Mahan Homestead
Bibb County

Colonel Tannehill's Old House
Tuskaloosa County

Public Road near Brierfield Rolling Mills, Bibb County

In the Blue Cahaba Hills on the Road to Brighthope, Bibb County

The Mahan boys and the others started mills, limekilns, road building, farming, and wagon making. They sold wagons to the Government and contracted to help move out the Indians. In the long western procession of the tribes that so soon followed, the Mahan make of wagons led the van. Mrs. Mahan relates how Edward Mahan, her father-in-law, used to tell about seeing "whole rooms packed with beads" which the Federal Government Agents gave to the Indians for their lands instead of the money they were authorized by the administration to give in square deal. The Mahans also did considerable railroad construction work and trestle building through south Alabama. Jesse Mahan, a son of Edward Mahan, became in after years something of a figure in the political affairs of this section. He was also a Union man. When pressed at length into the service of the Confederate Government, he took his slaves and conducted the salt works near Mobile. Later made iron inspector by the Confederate Government with the rank and pay of major, he had also charge of the timber and wagon department, shipped timber to Selma from his sawmill on Mahan's Creek, and donated several acres of his property on the Creek for the Confederate rolling mill at Brierfield. He served as a member of the Constitutional Convention during the reconstruction times, and as State senator from Bibb in 1868. His father and uncles built the first flat and keel boats ever floated on Cahaba River to carry coal. They surveyed the county lines and removed the county seat from Randolph to Centreville.

The discovery and original crude workings of various of the mines in the Coosa and Cahaba coal fields, later to be developed by Truman H. Aldrich, Henry F. De Bardeleben and their associates, is directly traceable to this little group of pioneer settlers and those following them.

Other smiths of territorial Alabama, contemporary with these men of Jackson's brigades, were Joshua Callahan, Benjamin Burns, Hugh Finley, Fleming B. White, and William B. Forrest.

Joshua Callahan traded for land from the Indians in Blount County. Settling there in 1816 he farmed and carried on his trade till his days were done. Benjamin Burns, whose father was one of the early patriots killed at Bunker Hill, got public land in St. Clair and brought up his son, Theodore Burns, to the blacksmith trade. This Theodore married a daughter of another of Jackson's fighting crew, and settled among the Indians

in Talladega County in the thirties. He followed his trade for thirty-five years, seeing the iron business of Talladega rise and fall. He saw war service for the Confederacy, out of which he emerged, stripped of all his possessions, with the exception of one old cavalry mare and a few extra horseshoes. With this stock in trade he set up shop again and worked till his days were done. Hugh Finley put up a smithy at Tuscumbia in 1815. Fleming B. White of Madison County had been carried into Alabama from Virginia in 1806 when he was five years old, and was toted by his half brother, Samuel Smither, on a pack mule across the Great Smoky Range. When the boy grew up he operated a tannery, supplying the whole north country with harness, shoes, and saddles. His son, W. S. White, fought for the Confederacy at Gettysburg and settled later in Limestone County. The blacksmith, William Forrest, lived in Tennessee not far from the northern border of Alabama, up among the giant cedars of the Duck River County. It was he who was the father of General Nathan Bedford Forrest, C. S. A. That boy, kith and kin to Bill Weatherford and Andrew Jackson, was bred out of the stuff of these rude and uncivil times. Son of a blacksmith, he was the South's one born workman general. The place he was bred in was a smithy. It squatted alongside the public road on which stuck yet above ground the stumps of trees — it was so fresh blazed — " with bellows, forge, and anvil, tongs and the other simple paraphernalia of an artisan in iron." [1]

From that time to this there have been just such shops, all alike breeding strong workmen, and leaving certain significant and permanent results. A word or two by Theodore Roosevelt touches on this matter. Says he: "The great nations of medieval times who left such marvelous works of architecture and art behind them were able to do so because they educated alike the brain and hands of the craftsman. We, too, in our turn, must show that we understand the law which decrees that a people which loses physical address invariably deteriorates; so that our people shall understand that the good carpenter, the good blacksmith, the good mechanic, the good farmer really fill the most important positions in our land; and that it is an evil thing for them and for the nation to have their sons and daughters forsake the work which, if well and efficiently performed, means more than any other work for our people as a whole."

[1] John Allen Wyeth.

CHAPTER III

FIRST FURNACE AND FIRST RAILROAD

The Story of Old Cedar Creek furnace. Early settlement of Russells Valley. Description of old ways and means of iron making. Method of getting ore. Disposition of product. Pioneer furnacemen and settlers of Franklin County. Folklore of the region. Records of State geologists. Present-day appearance of furnace site. Operations of Sloss-Sheffield Steel and Iron Company, and Sheffield Coal and Iron Company. Industrial enterprises contemporary with Cedar Creek furnace. Progressive spirit of first governor of Alabama. Survey of early times and conditions. Construction of old Decatur and Tuscumbia Railroad. Sketch of David Hubbard. Early means of transportation. Pioneer railroads of State.

IT was up in the Chickasaw country in the northwestern region of Alabama Territory, county of Franklin, that the first blast furnace of Alabama was put up in the year 1818, and pig iron making on a commercial basis begun. There had been, as has been mentioned, forge and smithy at Indian village, Spanish fort, Federal trading post, and territorial colony; but the frontier smith wrought out of imported blooms and bars for the most part, and little use was made of Alabama iron ore. Concerning Old Cedar Creek, which was the name given this first blast furnace, all facts have, after much searching, become distinctly outlined.

That precise locality opened up to settlement by Jackson's scout, Major Russell, was incorporated in part of the huge land grant of the Chickasaw Cession of 1818, out of which the county of Franklin was formed. Shortly after the organization of this county, an iron maker, one Joseph Heslip, took up ground in Russells Valley, some three miles from Russellville, and established there the first iron works of Alabama. According to the records in the land office at Montgomery, "Joseph Heslip bought the SE¼—10—7—12 from the Government, November 11th, 1818, at two dollars per acre." It is also recorded that Anthony Winston and John Hamilton bought land at the same time in this neighborhood. As soon as his grant was recorded Heslip selected a furnace site on the horseshoe bend of

Cedar Creek where the water had a sharp, quick flow, and, according to T. L. Fossick, he straightway bought materials and began construction work. His plant, rapidly completed, comprised not only the rough stone jacket-clad furnace, but also a Catalan forge, a foundry, and a crude sort of rolling mill, together with warehouses and tenants' shacks.

Cedar Creek furnace itself, taking front rank in the series of pioneer iron works of the State, was a perfectly simple affair, very like a limekiln in appearance, and not different from the other furnaces of colonial times, several of which were in blast at that period in the near neighborhood of Tennessee. It was after the fashion of the blast furnaces of ancient Briton, and was heavy, stolid, massive, a heritage of the Roman iron makers which was carried over seas to the American colonies, intact and centuries old. The illustrations of Brighthope and Tannehill are examples.

To quote L. K. Pounders:

"This furnace was rudely constructed and very unlike those of to-day. It must have been lined inside with some kind of fireproof bricks, but certain it is that the greater portion of the building was limestone rock quarried from the bluffs near by. The furnace proper was somewhat conical in shape, being from twenty-five to thirty feet in diameter at the base and narrowing at a height of about twenty-five feet into a short smokestack. The furnace and smokestack together were not over fifty feet high. The blast which heated the furnace was supplied by a kind of bellows run by water power. One of the most interesting features of the plant was a large forge hammer weighing five hundred pounds. It was lifted by water power and let fall by its own weight upon the piece of iron to be forged, thus doing the work that is now done by the rolling mills."

This huge hammer also served to break up any extra hard lumps or boulders of the iron ore which were too bulky for use in the furnace. Miss Liza Ann Hamilton and Mrs. Jane Sherrill, of Franklin County, to this day distinctly recall hearing, long ago, the incessant throb and ring of the big hammer, sounding day and night over the country for miles and miles.

Joseph Heslip obtained his ore from the neighboring hills. "This was all surface ore," says Charles E. Wilson, "which the farmers were glad to give the furnace people to get it out of the way for tilling the soil." This particular quality of iron ore, known as the Lafayette formation limonite is, according to Dr.

Eugene A. Smith, the principal ore of the northern part of the State, in the counties of Colbert, Franklin, Marion, and Lamar. "Loose bowlders scattered over the surface supplied the first furnace," says Dr. Smith; "many of the deposits are on high ground and are comparatively shallow, as shown by the diggings extending down to the underlying bedded rocks. Other deposits in lower situation are fifty and sixty feet and more in depth. The ore is mostly a dark-colored compact ore, but in some of the deposits it is of concretionary nature, with red and yellow ochres filling the cavities."

The State geologist likewise confirms the fact of a Catalan forge in this Cedar Creek locality, "for," he says, "lumps of malleable, as well as cast iron, are to be found around the old furnace ruins." L. K. Pounders observes: "Great pits may be found, from which the ore was taken and hauled one or two miles on an ox wagon to the furnace. The flux used was taken from the quarries of limestone with which the country abounds. It may be said, by the way, that it is only about one-half mile from this old furnace place to Rockwood, Alabama, from which latter place T. L. Fossick and Company are daily shipping this same limestone to the furnaces at Sheffield. Analysis of this stone shows as high as ninety-eight per cent of pure calcium carbonate."

The fuel used was cedar charcoal exclusively. Thousands of trees of the finest cedar were destroyed. Heslip purchased a large portion of this timber from another pioneer settler, W. S. Jones, the son of Colonel T. S. Jones, an officer of the American Revolution. W. S. Jones settled in Russells Valley with his young wife the year the State was admitted to the Union, and took up a tract of seventeen hundred acres. After his crops were laid by he used to take a crew of some fifteen or twenty negro men and set out to cut and cord wood for Cedar Creek furnace. "Timber was plentiful," says L. K. Pounders, "and this was cut and heaped together in large kilns and kept burning for days, care being taken not to let a draft to the burning wood which, in this smothered condition, soon burnt into a coal. In this way the fuel was prepared. As charcoal will not decay for ages the places where these kilns were burned still show unmistakable signs of the early manufacturer. Sometimes a whole acre will be as black as charcoal can make it."

There seems to have been large demand for the iron from the very day the furnace went into blast. Heslip took into partnership

two men, a certain Mr. Burnsides and one Gillespie. They employed a force of workmen and planned what was, at that period, a considerable business. To start with, they supplied bar iron for the use of the blacksmiths and forge builders throughout north Alabama and made castings out of which were fashioned hollow ware and agricultural implements. As it was before the day of stoves in Alabama, this pioneer furnace supplied the homesteads with old-time cooking vessels, iron pots, and cranes. The hollow ware of Cedar Creek furnace therefore became widely known.

"The product was hauled in wagons to South Florence," says Charles E. Wilson, "when the river was in good boating condition. But when the water was low it was hauled to Chickasaw or to Riverton, the distance to Chickasaw being about twenty-six miles, and to Riverton thirty-five miles."

Mr. Wilson's father, Brice Wilson, came across as a boy from Scotland, settled in Franklin County in 1819, and started a store at Russellville. Long years afterward he used to tell his own boys, who are to-day prosperous merchants of that locality, how, near the close of 1820, a plague crept over Old Cedar Creek Iron Works. It was a wasting sickness of a mysterious and fatal nature, and the workmen of the furnace, their wives, and children died like cattle. All day long and all night, too, graves were dug and carpenters made coffins. Brice Wilson used to tell how he could hear from far off the sound of the hammering, in the middle of the night, and how he would lie awake and hear them, hour after hour, nailing up the dead. For two years desolation brooded over Cedar Creek furnace and the place became utterly forsaken. Shrouded as in a winding sheet, it was avoided as haunted ground which stirred with malignant spirits and nameless terror. Joseph Heslip, Burnsides, and Gillespie disappear from coal and iron records from this time.

At length, late in 1822, one Aaron Wells, a furnaceman from Fayetteville, Lincoln County, Tennessee, took up the abandoned property. He came with his daughter to live at the haunted ground and, reviving operations, struck daylight out of the gloom. He took into partnership a young man, Dobbins, who married his daughter, and later there were associated with the firm two other iron makers, Buck and Hale. For four years the men worked along steadily, as best they could without capital. But the handicaps were hundred-armed. Pushed to the wall,

Aaron Wells at length turned back to Tennessee. One gracious incident invests the name of this old furnaceman with a certain scholarly charm, for to his little granddaughter, born at the furnace there in a cottage overleaning the running water, he gave the name of Narcissus.

The iron works later passed into the ownership of another Tennessean, Dr. Robert Napier of Nashville, which accounts for the name "Old Napier Furnace," found in certain records. Connected with this new management, dating from 1826 to 1832, (some hold to 1836) were two other men, Chandler and Peel. Capital was put into the enterprise, improvements followed, and a pronounced period of commercial success resulted. An excellent grade of charcoal pig iron was turned out. According to various authorities the operations at Cedar Creek were at length abandoned on account of the expense of ore getting and the difficulties of transportation, but Miss Hamilton explicitly states that the abandonment followed the collapse of the stone stack; that one night, early in the eighteen-thirties, the whole thing suddenly caved in, and put an end to the business. Never again did hand, even the hand of Tennessean, dare attempt the rebuilding of Old Cedar Creek furnace.

"When the last laird o' Ravenswood
To Ravenswood shall ride
And woo a dead maiden to be his bride,
He shall stable his steed in the Kelpie's flow
And his name shall be lost forevermore." . . .

So the works went fast to rack and ruin. Late in the eighteen-thirties, Miss Hamilton recollects, the offices and tenants' houses remained intact and there were quite a lot of folk living in the neighborhood.

Michael Tuomey, the first State geologist, visited this region in the eighteen-forties and recounts in the "Second Biennial Report of the Geology of Alabama," published in 1853:

"About three miles from Russellville another bed (of chert) occurs in a ridge running north thirty degrees west. For some distance in this ridge iron ore is found in greater or less abundance; it is in general of good quality, and free from intermixture with foreign substances. Numerous excavations in the ridge mark the spots from which ore was produced for the supply of a furnace that was once in operation on a branch of Bear Creek, about three miles beyond the village. The ore is of excellent quality. A considerable amount of labor was required

for the extraction of the ore, for it is scattered through the bed of loam, and whilst the beds are rich in some places they may be barren at others; and as the surface rarely presents any indications of bodies of ore much unproductive labor must have been the result. On the way to the furnace indications of the existence of ore are found on the surface, and an occasional excavation was seen; but the ore in the vicinity of the furnace is much less pure than that of the beds between the village and Newberry. The ruins of the furnace still remain, and the fragments of iron scattered about show that both castings and malleable iron were manufactured here. The high charges and difficulties of transportation are the causes to which the suspension of these works are attributed."

When "Billy" Goold and Llewellyn Johns were out prospecting for Colonel Enoch Ensley, away along in the eighteen-eighties, they ran across the ruins of Old Cedar Creek. "I dinna look twice," said Uncle Billy," 't was na but a mess o' weeds an' rock to me. Did I know now 't was the first furnace of Alabama, aweel, that had been different! But I thocht had been some auld limekiln."

The ruins of furnace and little settlement withstood the erosive forces of rains, weather, and overflow for an extraordinary length of time. Even to-day the foundations of one of the old storage rooms crumble beside the creek near the "furnace spring." And there are scattered all through the ruins and the jungle of the underbrush, broken pieces of skillets, pots, and kettles. All that remains of the furnace itself in 1909 is a conical mass of stones and earth shadowed by tall beech trees and resembling more an Indian mound than masonry, while a narrow promontory of slag containing broken bits of iron and charcoal extends out into the stream. There is also a distinct line of depression, easily followed for some four hundred yards, from one heel of the horseshoe bend to the other, a two-mile span, which served as the old mill race. There is rich farming land about the town of Russellville and the Darlington station of the Northern Alabama Railroad, but in the neighborhood of the furnace property, once so busy, there is to-day no sight or sound of life. "Until 1888," observes Dr. William B. Phillips, in his "Iron Making in Alabama," "a period of sixty years, this deposit of the brown ore of the Russellville belt remained undeveloped and unused."

W. A. Orman, of Russellville, who photographed the Cedar Creek site for this work, mentions that his aunt, Mrs. Sherrill,

1. Site of Old Cedar Creek, First Blast Furnace of Alabama, Franklin County, 1818
2. Ruins of Brighthope Furnace in Bibb County
3. Rob Roy Catalan Forge on Talladega Creek, Talladega County

still preserves a large sugar kettle made at the old furnace. Charles E. Wilson has a slab of this early iron, weighing one hundred pounds and resembling more a casting than an ordinary bit of pig iron. Another piece has served occasionally as an exhibit at various State fairs.

The following incidents are related in a current number of the *Bessemer Weekly:*

"Since the early days, brown ore mining in Russellville has had a checkered career. An immense amount is now in progress. Stability came a few years since when the Sloss Company was reorganized into the Sloss-Sheffield Steel and Iron Company, and the three furnaces that were once the interests of Colonel Enoch Ensley in this section passed into this company's hands. . . .

"A remarkable story is told by Mr. C. E. Wilson, which demonstrates the fact that some of the iron lands of Russells Valley are worth more than gold mines. He says: 'A few years ago I sold a small plot of ground — about an acre — lying near Russellville, to a negro as a building site, for the sum of fifty dollars. He occupied and cultivated the land for some time, then gave one of the mining companies an option on it at a valuation of five hundred dollars. While they were mining the ore from adjoining land their option expired, and the negro sold the plot for five hundred dollars cash to a couple of citizens who knew the value of it. When the mining company realized their oversight they tried to buy this bit of ore land from the recent purchasers, but could not get it, and were compelled to pay a royalty of fifteen cents a ton on all the ore obtained from it. Their steam shovels are now digging away, and it is estimated that more than twenty-five thousand tons will be dug, amounting to a royalty of nearly four thousand dollars for this single acre. And there are adjoining acres just as rich.'"

"Another story is told to the effect that Colonel Ensley once asked a man what he would take for ten acres of land which he owned near Russellville. The man said that he would sell it for five dollars an acre as it was a little rough for farming. The price was paid and this piece of land is one of the richest now owned by the Sloss-Sheffield Steel and Iron Company. This company also owns great tracts of iron land a few miles east of Russellville, and operates five immense washers where upwards of a thousand tons daily are loaded in cars and sent to the furnaces at Sheffield and Florence.

"The Sheffield Coal and Iron Company's plant is also conducted upon a large scale, and here in addition to the washers this company maintains a large limestone quarry. The Alabama-Virginia mines and washers are situated five miles southeast of Russellville, and from this point also hundreds of tons of raw material are shipped each day. In fact nearly all of the ore which

supplies the big blast furnaces at Sheffield comes from Russellville, and the mining of this ore gives employment to hundreds of laborers and contributes largely to the prosperity of the town."

Besides those of the early settlers of Franklin County thus far mentioned, — the families, Russell, Heslip, Hamilton, Jones, Sherrill, Wilson, and Orman, — there were several other families located in the neighborhood of Old Cedar Creek at its start, whose descendants became more or less identified with the Birmingham District. Among these are the names Van Hoose, Martin, and Bankhead.

Jesse Van Hoose was a partner of Brice Wilson in the mercantile business at Russellville. His folk, the Van Hoosens of Holland, had emigrated to New York shortly before the Revolution and he himself had come to Mississippi Territory and joined Major Russell's colony among the Chickasaws in 1815. In 1821 young Van Hoose became first clerk of the Circuit Court of Franklin County, and shortly afterwards went into the woods of Pickens, later Fayette County, on a trading expedition. He was the second white man to settle in that region, and in 1826 was elected to the State Senate, and eventually became Judge of the County Court. He afterwards located his mercantile business in Tuskaloosa and became one of the original board of trustees of the University of Alabama. His son, Colonel James M. Van Hoose, years later practiced law in Birmingham where the family became connected with various civic enterprises.

The Martin family, with the Rosamunds, were among the band of French Huguenots who fled to Virginia in the seventeenth century. From thence they traveled into Tennessee, and at length settled in Alabama near Cedar Creek. Joshua Lanier Martin, born in 1799 in Tennessee, joined his father in Franklin County. Later he practiced law in Limestone and Tuskaloosa, and became a governor of Alabama. His sons were Captain John M. Martin, United States Member of Congress in the eighteen-seventies, and Charles J. Martin, clerk of the Inferior Court of Birmingham. There is further mention of Charles Martin in the "War Period." E. P. Rosamund of Birmingham, a son of Dr. William Capers Rosamund, of Jasper, Alabama, is to-day general superintendent of mines of the Pratt Consolidated Coal Company.

Dr. Rosamund had settled in Walker County about 1856, having come from South Carolina. His ancestors fled from France in 1598 at the Edict of Nantes, and settled first in Virginia.

In Alabama Dr. Rosamund served in later years as State senator from Walker, Jefferson, and Shelby counties.

Among other French families leaving their home during the Huguenot persecution was the family De la Roche, of whose stock, identified to-day in the coal and iron business of Alabama, is Guy R. Johnson, vice-president and general manager of the Alabama Consolidated Coal and Iron Company.

Genuine pioneer beginnings for the iron business can thus be discerned from the Cedar Creek attempt and from the records of the frontier smiths and early iron makers. The first blast furnace antedates, by twelve years, the first cotton mill in Alabama. It is coincident with the first organized effort at river transportation, with the incorporation of the St. Stephens Steamboat Company; the establishment of the first banks of the territory, at St. Stephens and Huntsville; and with the founding of the first institution of learning beyond the log cabin schools, the old St. Stephens Academy. From every view point, industrial, financial, educational, and political, the year 1818 is of tremendous import in Alabama history, quite apart from its significance in these chronicles as the birth year of the blast furnace.

The whole territory was being driven at racing gait into statehood, though under steady reins. As to the man holding these reins, William Wyatt Bibb, first governor of both Territory and State, he stood stalwartly for law and order and urged progress in diverse lines. For instance, he organized the three judicial districts, repealed the laws upon usury, advocated road making, bridge building, placing of ferries, making of schools, and he endeavored to suppress Indian outrages in the ceded lands. He appointed an engineer to examine the rivers and report how navigation might be improved. Further, in 1818, Governor Bibb formed thirteen new counties, a number of which are in the mineral belt. He altered the boundaries of various then existing counties and prevented encroachment of Mississippi. He placed, in short, some semblance of the yoke of government upon the crude, wild young country, and gave it foundation on which to build.

He was a quiet sort, this William Bibb, a man with a clear vision and steady nerve; gifted, too, with a certain quick sense of diagnosis. Doubtless his several years' practice as a surgeon bred in him those precise qualities that stood young Alabama in such good stead. At any rate, President Monroe, translating the

young Georgian from his seat in the United States Senate to governorship of what was then a world of half breeds, soldiers, and emigrants, had his faith in the man fully justified.

Like several other men in the lead of affairs of earliest Alabama, William Wyatt Bibb had, too, a pronounced spirit of pride in the Union and affiliation with the Union. As a slight tribute to headquarters as it were, some of the first counties organized were named after Madison, Jefferson, Monroe, and Ben Franklin. The first county, Washington, bore name, as has been instanced, from Mississippi Territory days. This early sense of brotherhood became smothered all too soon. In the succeeding decades, the State came to have a wan feeling, and, indeed, actual condition of isolation from the Union; it had small voice, inadequate representation, and even in its own immediate internal affairs, no unity, no organization, and no industrial brotherhood or common ground of industrial endeavor or hope.

An instance in point is the first railroad venture of Alabama, the Decatur and Tuscumbia, set on foot in 1829–30. This, the initial railroad south of the Alleghanies, had origin in the same region where the first blast furnace was constructed, in the county directly adjoining Franklin at the north, named Colbert, after one of the friendly Chickasaw chiefs. This particular section of Alabama was well settled as far back as 1779. Indian villages and French trading posts existed near the sites of the present cities, Florence, Tuscumbia, and Sheffield. Although pioneer furnace and pioneer railroad enterprises were contemporary in a partial degree, they had no bearing upon each other, else had the entire character and history of the coal and iron business of Alabama been utterly changed, and the Sheffield District, not the Birmingham District, first moved into bold emprise and into light of the world's eye. As it was, both furnace and railroad suffered early collapse. Their main uses were to point directions to succeeding enterprises in later generations; Cedar Creek to Sloss-Sheffield Steel and Iron Company's workings, and the Decatur and Tuscumbia to the Memphis and Charleston Railroad.

But to the story. There was a cotton planter in that Tennessee Valley region, David Hubbard, who was early on the lookout, as men have been since his time to the present day, for ways and means to overcome the obstruction to freight traffic caused by the Mussel Shoals of the Tennessee River. He learned of a new, odd transportation method then being attempted at Mauch

Chunk, Pennsylvania, and in 1829 he went up to investigate. This, as it happened, was the first railroad experiment in the United States. It was a switch-back or gravity road some twenty miles long and operated by a stationary engine. It was used for hauling anthracite coal in the Panther Creek Valley.

Upon seeing it, David Hubbard decided to adopt it in Alabama for cotton transportation, the line to lead from a point opposite Florence, where the city of Sheffield is to-day, to Tuscumbia, the lower terminus of the Mussel Shoals, and thence to Decatur. Charter was granted by the Alabama legislature in 1830. Major Hubbard formed a company made up of various cotton planters. Benjamin Sherrod was elected president. They then set to work to get up subscriptions, as all their successors in the early railroad history of Alabama were destined to do. Then and there was the root of Alabama's disorders struck upon. No alliance of common interests, no concentrated effort or enthusiasm for progress could be rammed into the legislature or the people. Sherrod and Hubbard were forced to give their individual endorsements to support the obligations of the road in order to bring it to completion. The grades were light and the track laid out as a strap rail: pieces of bar iron bolted on parallel wooden stringers. It came inside the estimated cost of $5,000 per mile, but equipment and rolling stock counted heavily. A George Stephenson locomotive with copper fire box was bought. Construction work straggled along at the rate of from twelve to fifteen miles a year. By 1834 the forty-six-mile line was complete. The passage of the first "through train" was given a great greeting all down the line. "The little Stephenson fellow" made full ten miles an hour pulling cars laden haystack high with cotton bales. It soon got out of repair though — doubtless because of a farmer at the throttle — and mules became the motive power. This circumstance gave color to the declaration that the Decatur and Tuscumbia Railroad was no railroad but a tramway, and therefore not the first in Alabama. The existence of the little George Stephenson proves the case.

Industrial events coincident with this first railroad were the opening in January, 1832, of the first canal of Alabama, connecting Huntsville with Looney's Landing; the erection of the Bell Cotton Factory, and the incorporation, also during Governor Gayle's administration, of three branches of the State bank at Montgomery, Decatur, and Mobile.

As to Major Hubbard, he served as representative and senator, and as one of the early board of trustees of the University of Alabama, and in 1839 was elected to the United States Congress. By his railroad venture, both he and Benjamin Sherrod lost eventually the bulk of their personal fortune, for the other people, prolific of promises and cheers for the enterprise, never backed it with a dollar. It was small wonder that Major Hubbard's temper was in shreds at the last and that he was termed "unpopular." His failure of a railroad, under hand of Sam Tate, was resurrected in the eighteen-fifties, when it became part of the old Memphis and Charleston, which was projected in the main by Huntsville men.

Back of the history of every railroad set going in Alabama, one tastes sour facts. The records of the fight for transportation are too voluminous to approach, the evolution of that phase of development too intricate for other than a glance now and then. The first ways through the wilderness were, as a matter of course, the ancient Indian trails, followed by the trade routes, which were cut by the French and English fur traders, the early colonial ways, pioneer wagon roads, Federal roads, and military traces, all of which followed in the main lines of the Indian goings. Peter Hamilton observes that a common fallacy throughout the State has been to attribute every road ever made in Alabama to Andrew Jackson. The mail routes grew over the wagon roads. And all the early smiths, iron makers, and forge builders peddled their hollow ware and bar iron by wagon, ox, or mule team over these rough wagon roads. The mail stage system, carried to top notch by Powell and Jemison, gave place in the late eighteen-fifties to the railroads for traffic, and early coal transportation that was carried on by flatboats, barges, yawls, and dugouts, was superseded by the steamboat squadrons — another book of Alabama doings.

Following the 1830 railroad venture, charter for a second railroad, the old Montgomery Western, was granted by legislature in 1834. The third and fourth railroads, each of which was chartered in 1848, were the Mobile and Ohio and the Selma, Rome, and Dalton, formerly Alabama and Tennessee Rivers Railroad, now a part of the Southern system. Fifth in the list is the Wills Valley Railroad, chartered in 1852, and sixth, the Northeast and Southwest, or Alabama and Chattanooga, now the Alabama Great Southern, chartered in 1853. The Alabama South and North Railroad, now a part of the Louisville and

Nashville Railroad system, and the main road of interest in these records, was chartered in 1854. The date of charter by no means indicates the date of construction, for in the majority of instances, no sooner did the legislature grant charter than it endeavored to strangle further attempt at construction. In the chapters relative to the South and North Railroad the matter will be presented in detail. All the evidence goes to show that whatever was done in the way of securing transportation facilities in early Alabama was accomplished by the efforts of a few individuals at great personal sacrifice in the face of not only public indifference, but often violent opposition.

CHAPTER IV

EARLY RECORDS OF JEFFERSON AND WALKER COUNTIES

First settlement in Jones Valley. Origins of mining towns in Birmingham District. Old Hawkins Plantation site of Thomas. Folklore of Shades Valley. Early uses of iron ore by first settlers. Founding of Elyton. The pioneer prospector of Red Mountain. Old log cabin schoolhouse first building on property of Woodward Iron Company. Making of first iron out of Red Mountain ore. Last glimpse of Indians of Alabama. First coal operations. Story of the Hanby family. Tuomey's description of diving for coal. How coal was floated down to Mobile. First Warrior coal mined in 1827. Speculators visit region in eighteen-forties. Remote and unsettled character of Walker County. Reminiscences of early settlers. Famous pilots of coal barges. Summary of antebellum operations in Walker County by Joel C. Du Bose. Sketches of leading pioneers of coal business. Anecdote and incident of old days.

OTHER counties besides Franklin, established early in Alabama's history, and of special interest in these chronicles, were Blount, Jefferson, Walker, Tuskaloosa, Bibb, Shelby, Talladega, Calhoun, Cherokee, Lauderdale, and Lamar. Their records are treated in the following three chapters and cover territorial times, the period of young statehood, and the outbreak of the Civil War.

The first group to be considered comprises the counties of Blount, Jefferson, and Walker. A meagre log cabin colony was located in the extreme southern section of Old Blount County about the time of Andrew Jackson's coming into Alabama. Back of it there were of course Tennesseans, who appear to have been in the ascendency in those days all through the mineral belt. They were, in the main, men of fair working qualities, and, generally speaking, were game. According to Powell's "History of Blount County," a couple of frontiersmen, one John Jones and his brother-in-law, Caleb Friley, rode down out of Madison County about 1813, and took up home sites in the valley at the base of the long hill of red dye rock so treasured by the Indians.[1] They

[1] Miss Duffee writes in "Pioneer Days," *Birmingham Age-Herald*, August 15, 1909:

"From all I can learn it is my belief that John Jones came from Greenville district, South Carolina. In a letter received from Dr. Andrew Jones

built log shacks and a blacksmith shop, and blazed a wagon road up through the woods to Bearmeat Cabin, thus opening the country to friends and kinfolk, more fighting Tennesseans, and a handful of South Carolinians. In this Jones Valley, the city of Birmingham was founded in 1871. The little log cabin settlement, which was called Jonesboro, with its wooden fort, eventually became the site of the town of Bessemer. The crude, slight beginnings opened the way for the making of the town of Elyton and various other places known at the present time as Thomas, Woodward, Owenton, and Woodlawn, which were among those incorporated in 1909 in Greater Birmingham.

Old Fort Jonesboro was no more than the customary American pioneer fort of the wilderness, a hollow square, stockaded with logs, to which several families could muster in case of Indian attack. "It was seldom occupied," notes B. E. Grace, in the "Jefferson County Record," "for there were few Indians then in this portion of the country and no hostile demonstrations." Today the red ore mines of the Muscoda group, which belong to the Tennessee Coal, Iron, and Railroad Company, overlook the precise site of this little wooden fort.

Just across country, twenty miles northeast from Jonesboro and far up the valley, a second colony was started two or three years

of Amity, Clark County, Arkansas, and dated December 18, 1886, in reference to my sketches of the valley, then being published in the *Birmingham Age*, he says: 'As my ancestors were the settlers of that valley, and gave it its name, of course it would be interesting to me. The stories of my father and grandfather are yet fresh in my memory about the stirring times in the settlement there. John Jones and Mr. Roupe settled there in 1816. This John Jones was a cousin to my grandfather and wore the unenviable name of "Devil John" to distinguish him from the many others of the same name, and because of his wild habits. My grandfather went there in 1817, and lived there six years, some Indians being there at the time. Some years after his settlement he was followed by his brother, Jolly Jones, who settled near Tuskaloosa, and lived and died there. Soon after others came in and settled, Mr. Friley, General Woodward, the Hanbys, Mark Goodin, the Mitchells, McDuffs, McElroys, and Mr. Durrah, — all the above having come and settled there prior to the year 1825, at which time he left Alabama and went to West Tennessee, and to his old occupation of cane-braking for others. I remember to have heard him say that he left Greenville district, South Carolina, in the year 1799, and headed a caravan of movers to the southern district of Kentucky, and stayed there until 1815, then went to Hickman County, Tennessee, thence in 1817, to Jefferson County. About the time he went to the valley John Jones had a fight with Mr. Roupe which resulted in the favor of Jones, and Mr. Roupe sold out and went in the next valley below and settled, and that took the name of Roupe's Valley. I am glad to hear of "that garden spot of creation," as my grandfather was wont to call it. I may add that I was born in Hardman County, Tennessee, in 1827, and in 1835 went with the old pioneer to Pontotoc County, Mississippi, where he died at the age of 64.'"

after the planting of Jonesboro by a group of Tennesseans and South Carolinians, led by one John Wood. Mention is made of the families Cunningham, York, Tarrant, Cowden, Reid, Montgomery, Barton, Culbertson, Brown, and Hawkins. This colony, later called Woods Station, became in time Woodlawn.

Various feuds, "bear fights," Powell calls them, are mentioned as arising between the Tennesseans and South Carolinians. The Tennesseans took and held the pick of things, and usually came out "masters of the ring."

One of these pioneer settlers, Williamson Hawkins, took up two thousand acres near Village Creek, some four miles northwest of Woods Station. By the eighteen-fifties he owned one hundred and fifty negroes and made one hundred bales of cotton a year. His grandson, James Hawkins, became solicitor of Jefferson County and was also at one time a law partner of Senator John T. Morgan. The old Hawkins cotton plantation was sold in the eighteen-eighties to Samuel Thomas of Pennsylvania. The town of Thomas and the Pioneer Company furnaces, property of the Republic Iron and Steel Company, are located on these lands.

Not far from Fort Jonesboro over in the valley across Red Mountain, which is called Shades Valley, there wound in those days an Indian trail, leading from the Choctaw village, "Old Beloved Town," later known as the city of Tuskaloosa, to another Indian village on the Cahaba. Crossing Shades Mountain, the escarpment of the great Cahaba coal fields, it ran near to the spot where in 1862 the Oxmoor furnaces, now owned by the Tennessee Company, were built. "Long after the settlement of Jones Valley," observes Grace, "this trace was distinctly visible on property owned by Rev. John Caldwell."

As for the story of Shades Mountain and Shades Valley, the names seem rooted in gloom. One account, related by the widow of Baylis Grace, tells how a traveler, a trader, perhaps, passing through that region was set upon by robbers and murdered. His skeleton was found years and years later, on the bank of the little creek in the valley. The stream was therefore called "Creek of the Shades of Death," and so gave name to both valley and mountain. Another tradition relates that the place was given its sad name on account of the taking off of many of the first settlers who were stricken with fever. Still a third explanation is simply that because of the quick-coming shadows and the dense foliage, a taller and richer growth by far than in Jones Valley, "the place

just naturally came to be called Shades Valley or Valley of the Shadows."

Once two English pilgrims, Thomas W. Farrar and Seraphine Farrar, passed over Shades Mountain on their way to settle in Elyton. On the crest of the high ridge are rocks, sharp-cut and curiously eroded, out of which a Doone might spring. Here on the highest point of the ridge, at the spot called Lovers Leap, the travelers carved, in old English letters, so clearly and exquisitely wrought that they are plainly legible to this day, their names, the date August 20, 1827, and these words from *Childe Harold:*

> *"To sit on rocks, to muse o'er flood and fell,*
> *Slowly to trace the forest's shady scene*
> *Where things that own not man's dominion dwell*
> *And mortal foot hath ne'er or rarely been."*

Jefferson County was carved out of Blount by act of the legislature in 1819. In that year the "cities" were Bearmeat Cabin, — later Blountsville, the headquarters of an Indian chief, — Elyton, and Jonesboro. All were located on the public wagon road, the Huntsville Pike, "a lonely rocky road." The blacksmith's shop at Jonesboro was, so Miss Duffee states, "the leading iron working establishment of Jones Valley, and was looked on with awe and admiration by the Indians. . . . In the early settlement of the valley, a few remaining bands of the Creek tribe annually traversed the region from their camp at Mudtown, on the Cahaba, to Oldtown, on the Warrior, on their trading expeditions in belts, bows and arrows, and cane baskets. They were a harmless set of vagabonds, and gradually disappeared from the haunts of the white race as the country became more populous. They used the iron ore, or red-dye rock, as it was familiarly called, to stain their implements and form a mixture for their favorite war paint. For many years it was a popular element in the domestic economy of the pioneer families and with it they colored their woolen and cotton fabrics, and being easily set with chemical substance, it made a lasting and beautiful dye stuff, especially for jeans, blankets, cover-lids, and linsey dresses for the belles. Numerous efforts to utilize the ore were made by the county blacksmiths by constructing crude ovens and mixing lime rock with it, but no practical results followed, as the product was too brittle to admit of heating and hammering into shape on the anvil. All metal products were costly in those days and had to be transported on horses or by wagons from one to two

hundred miles. A few bars of iron were of almost priceless value in the eyes of the farmers. Mineral lands were consequently looked upon as useless and possessed no market value whatever; in fact they were carefully avoided by the seekers after homes and lands in the valley."

By 1830 Jones Valley had become fairly well settled. "And the woods," says Baylis Grace, "suited a hunter to the queen's taste. The south side of the Cahaba River was then almost entirely uninhabited. The Warrior and the Cahaba were beautiful streams, clear as crystal, in which you could see a fish in ten feet of water. . . . We all wore buckskin leggings reaching from the ankle up to the hips, fastened with brass buttons on each side of the leg all the way up. Cattle were raised in the woods and afforded all the butter, milk, and beef we needed. What little cotton was made was hauled to the falls of the Black Warrior, as Tuskaloosa was then called, and exchanged for salt, sugar, coffee, and calico, which latter was then twenty-five cents per yard. The first grist and saw mill supplying Jefferson County with meal, flour, and lumber was built by William Rose Sadler."

Mr. Sadler was a Virginian, and by profession was a surveyor and civil engineer. In addition to starting the first mills in Jefferson County, he put up brick kilns and built the old brick courthouse at Elyton as well as courthouses in other localities. Among his great-grandsons are James McAdory Gillespy and John Sharp Gillespy, who are citizens of Birmingham to-day.

The first "Seat of Justice" of Jefferson County was a log hut near the old Worthington place. A cabin at Carrollsville was later used, and at length, in 1820, the Elyton courthouse was built. Elyton, the first market town and trading center of the county, was incorporated in 1820 with seven hundred inhabitants. The town site, comprising one hundred and twenty acres, was a gift to the early settlers by a Federal land agent, one William Ely. "Captain" Ely was a native of Hartford, Connecticut. A curious instance on file among the old deeds of the county is the record that Captain Ely had ceded to the Deaf and Dumb Society of Hartford, by special act of Congress, in 1816, hundreds of acres of Alabama lands, of which the suburbs of Owenton and Earle Place are now portions. Among other early settlers of old Elyton and its immediate vicinity were James McAdory, David Prude, John Martin, James Hall, Stephen Reeder, James Mudd, Jonathan Steele, Thomas W. Farrar, Stephen Hall, John M.

Dupuy, Thomas W. Rockett, J. W. McWilliams, Daniel Watkins, E. W. Peck, W. B. Duncan, Samuel S. Earle, Baylis W. Earle, Charles McLaren, William A. Walker, John W. Henley, Peyton King, William F. Nabers, William S. Mudd, M. T. Porter, Joseph R. Smith, M. H. Jordan, G. W. Hewitt, and P. H. Earle.

A wagon road was gradually made over an old Indian trace leading past Elyton, to Ditton's Landing on the Tennessee River, and thence to Huntsville. This was called the old Huntsville Road, and was used by the pony express and the early mail stages. It became the main traveled highway, together with the Montevallo Road of the mineral region, and the first route of transportation of the pioneer iron masters and furnacemen. The old Montevallo Road crossed Red Mountain. Constant heavy traffic ground the rocks in certain places into a fine red powder that early became a source of mystery. The first man so far as is known to assert that this was "iron dust" and the "dye-rock" iron ore was Baylis Earle Grace. It was generally said that Red Mountain rock was good for dyeing breeches, but was of little further use! Baylis Grace was brought by his parents into Jefferson County in 1820, when he was twelve years old. The Grace family was of old patriot stock. Joseph Grace, the boy's grandfather, had been killed in the Revolution at the Battle of Eutaw Springs. His grandmother had set her house on fire rather than let a British soldier enter. The family left North Carolina for Mississippi Territory in 1809. Baylis Grace attended the little log cabin school taught by Thomas Carroll, "along with John W. Henley, William King, Drayton Nabers, and the two Harrison girls." This was the first schoolhouse in Jefferson County, and had the old puncheon seats and dirt floor. The second school was started at Jonesboro a few years later and was taught by Hugh Morrow, a relative of John C. Calhoun, who came to Elyton in 1825. The property on which "Teacher" Carroll's school was located passed later into the hands of the Jordan family. Mrs. Fleming Jordan planted a rose garden on the site of the old log schoolhouse, and in 1882–83 the blast furnaces of the Woodward Iron Company were put up there, and the town of Woodward was laid out on the Fleming Jordan farm.

Baylis Grace left school after his father's death to enter the office of the circuit clerk, Harrison W. Goyne, at Elyton. He eventually became circuit clerk himself, then sheriff of Jefferson County, and later general administrator and guardian

for county holdings. His first land investment, a farm on Red Mountain, is still known as Grace's Gap. This, with the old Nabers and Worthington homes later became headquarters for various of the pioneer coal and iron men, prospectors, and geologists of the Birmingham District, prominent among whom was Major "Tom" Peters. Baylis Grace edited *The Central Alabamian,* successor to the first county paper, *Jones Valley Times.*

The story of the making of the first iron from Red Mountain ore is this: Having become convinced that the dye rock, exposed by travel over the old Montevallo Road, was iron ore, Baylis Grace cut into "a big twenty-foot outcrop" on his farm and dug out a wagon load. This was sent down to one of Jonathan Newton Smith's forges, in Bibb County, in the eighteen-forties. Here it was made into wrought iron and a few blooms were distributed to Jones Valley blacksmiths. Grace kept a bar of the iron as a prize exhibit all his life. On the spot from which he dug the ore Spaulding mine, owned by the Republic Iron and Steel Company, is now located. Grace also made the first sale of Red Mountain ore land for manufacturing purposes in 1862 from the tract later known as the Ishcooda group, and now owned by the Tennessee Coal, Iron, and Railroad Company. The purchasers were Frank Gilmer and John T. Milner, who with aid from the Confederate government, established Oxmoor furnaces. The old company purchased the entire west side of Grace's Gap, now owned by the Tennessee Company.

In later years Baylis Grace acted as agent for the Pioneer Iron Company and purchased hundreds of acres of iron and coal lands for the Thomas family, thus forming a nucleus for the Republic Iron and Steel Company's Alabama holdings captained to-day by Tracy W. Guthrie.

It is in the decade 1830–40 that one has final glimpse of the Indians of Alabama. "Like the leaves of the sycamore when the wind of winter is blowing," mourned a Choctaw orator, "the Indians are passing away, and the white people will soon know no more of them than they do of those deep caves out of which they had their origin!"

One group of Muscogee chiefs marched westward down the Huntsville and Tuskaloosa Road by way of Elyton. T. O. Smith's mother, then Margaret Jordan, remembers how she ran to get a look at them when she was a little girl. Baylis Grace remarks: "I recollect noticing them as they sat on the piazza of the Taylor

Historic Spaulding Mine on Red Mountain, where First Iron Ore in Jefferson County was dug. Republic Iron and Steel Company

Ishcooda Camp on Red Mountain and Plants of Slopes 13 and 14, showing Tipples as built To-day. T. C. I.

Hotel, and I think a finer looking set of men were seldom seen together."

It is at this time that the incident of Eufaula's last speech to the white men is recorded. It was in the Capitol at Tuskaloosa. As a final act of courtesy to the Muscogee chief, his request to be allowed to address them had been granted by the assembled legislature. Rising with a profound dignity, Eufaula stood upon the rostrum in the old senate chamber and spoke these words in the Muscogee tongue:

"I come, brothers, to see the great house of Alabama and the men who make the laws, and to say farewell in brotherly kindness before I go to the far West, where my people are now going. In time gone I have thought that the white men wanted to bring burden and ache of heart upon my people by driving them from their homes and yoking them with laws they did not understand. But I have now become satisfied that they are not unfriendly towards us, but that they wish us well. In these lands of Alabama, which have belonged to my forefathers and where their bones lies buried, I see that the Indian fires are going out. Soon they will be cold. New fires are lighting in the West for us, they say, and we will go there. I do not believe that our Great Father means to harm his red children, but that he wishes us well. We leave behind our good will to the people of Alabama who build the great houses, and to the men who make the laws. This is all I have to say. I come to speak farewell to the wise men who make the laws and to wish them peace and gladness in the country which my forefathers owned, and which now I part from, to go to other home in the West. I leave the graves of my fathers, for the Indian fires are going out . . . are almost gone . . . and new fires are lighting yonder for us. . . ."

Three generations ago Eufaula spoke these words. Yet one hears them now with beating heart and as though they were spoken but yesterday. And once every year they may be seen written plain upon the sides of Red Mountain. For always at the time the hunter's moon rises out of Shades Valley, the dead leaves of the iron hill are set on fire miles and miles. They burn from base to summit, and quiver in long, slender, curving lines and sweeping fiery circles and subtle form of ancient scroll and mystic hieroglyphic. Seen in the deep of night from the silent streets and houses of the city of Birmingham, high as clouds against the dark hill, they glow like master poems, lyric strains of the forgotten Indian life written upon the very skies of Alabama and sounding sweet and sorrowful forever.

The early period of Jefferson County, though rich in folklore and "neighborhood incidents," has no record of iron making beyond the smith's crude efforts and Baylis Grace's experiment, until the outbreak of the Civil War. It has, however, with Walker County some exceedingly interesting points in the early history of coal mining.

According to Baylis Grace, the men engaged in the first coal operations of Alabama were David Hanby, Captain James W. Hewitt, Jonathan Steele, and James A. Mudd. "Hewitt opened his mines near the mouth of Turkey Creek," he says; "Hanby's were higher up the river. Steele and Mudd were located near the mouth of Village Creek. They constructed flat-bottomed boats out of the tall poplars that grew in the rich bottoms, and with several thousand bushels of coal on board would float them down to Mobile. The Squaw Shoals was the great obstacle, for here they always had to wait for a rise in the river, but with plenty of water they generally went over safely, though some boats were lost and one or two lives."

It seems that as early as 1827, Jackson's old machinist David Hanby and his sons purchased land on Turkey Creek, in Jefferson County, one and one-half miles west of Hagood's crossroads, near the farms of the Green, Chambless, and Hewitt families. Joseph Posey, another one of Jackson's men, had a smithy here. John Hanby and his son put up corn, flour, and saw mills and did a large part of the grinding for Walker County. "Hanby's Mills" recurs frequently in the military reports during the Civil War. "Iron works" were put up at that point in 1863, and the locality was named Mount Pinson. To-day the Mount Pinson road, the smoothest road in the county, is the favorite run for motor cars outside of Birmingham. David Hanby's son says that, in 1840, David Hanby purchased some lands from Charles Loggins near the Blount County line.

On this land there was coal in the bed of the Warrior River. He built two flatboats in the fall and loaded them with coal and floated them to Mobile. In Mobile nobody would buy the coal. He had to give it away and send a negro along with every bucketful to show the people how to light it and burn it. By 1844 Hanby sent from eight to ten boats down over the shoals to Mobile and later as many as seventy-five boat loads. Old Hanby did a business amounting to six thousand dollars a year, it is stated, getting from four to seven dollars a ton in Mobile, for

the coal. He sold most of his shipments to the gas company in Mobile. Still the business was risky. Nearly every year he would lose a flatboat or so. One year, out of twelve flatboats, five were wrecked and lost. It was at the coal mines at the mouth of Village Creek, that Michael Tuomey, the first State geologist, records the following curious practice:

"I witnessed here a novel process in the art of mining, namely, diving for coal. A flatboat is moored parallel with the joints, and near the edge of the coal; long wedge-shaped crowbars are driven into the seams by means of mauls maneuvered by the men in the boat. When a ledge of about two feet is loosened in this way across the seam, the men take the water and dive, two or three together, according to the size of the masses to be brought up, and lift the coal bodily to the surface, and place it in the boat. As an improvement on this simple process, a crane is rigged on the boat, and a chain, slipped round the blocks of coal, raises them into the boat. I have seen, in this manner, masses raised that weighed eight hundred or one thousand pounds. The coal thus raised is free from all shale and other impurities, for, as the coal parts along the bands of shale, the latter are left behind. Notwithstanding the primitive appearance of this method of raising coal, it is, nevertheless, under favorable circumstances, and where the water is not too deep, one of the cheapest modes in practice, and with the addition of a diving dress, I am inclined to think that in no other way could coal be raised at an expense so moderate."

The practice generally in vogue, according to Tuomey, was to work the coal mines in drifts and "headings," as many of the red ore mines are worked at the present time. The coal was drawn up from the pit on an inclined plane by horse power, carried to the river, and conveyed down another plane to the boats. Concerning mining and reduction of iron ores, the first State geologist says:

"Mining operations are, throughout the State, conducted with one special object — present cheapness; it cannot be called economy, for it has no reference whatever to the future. To effect this, the surface of the bed is skimmed, and the covering, when taken off, is often thrown where it must be again removed, and in numerous cases, things are so conducted as to make future operations difficult, if not impossible. And, after all, I am persuaded that the end contemplated is not accomplished, and that the proprietors would find systematic modes far more profitable, even in relation to the present, than these unworkmanlike practices. Fortunately, expensive mining operations are not necessary

with us; the beds of ore are thick, and in every instance, situated on high ground, so that but little skill is required in the extraction of the ore; and if the labor employed were but rightly directed, it would leave little to be desired.

"Nothing can show more clearly the moderate state of information on the subject of the production of iron from the ores, than the assertion constantly heard even at the works that certain ores yield seventy, eighty, and ninety per cent of iron."

George Powell, the first county surveyor of Blount, and a teacher and geologist, wrote in 1855: "It is quite probable that the demand for coal will in a few years justify the construction of a railroad to the junction of Warrior and Mulberry, as almost all the coal is located on them and their tributary streams. It is true the tributaries are not navigable but they offer level ways by which to haul coal to the river, where it could be shipped to the junction on small flat or shoal boats which could return empty up the river. The Locust Fork of the Warrior contains some very fine beds of coal, which extend from the Jefferson line about ten miles up the river, and thin out. It was from these beds in 1827 or 1828 that the first Warrior coal was carried to Mobile in flatboats by Levi Reid and James Grindle. These coal beds now belong to Hanby."

Powell states further that the boating of coal was not continued, first, on account of the fact that the streams and rivers were not navigable except in times of a freshet of seven or eight feet rise; second, on account of the uncertainty of sales at Mobile. He says that besides coal, hogs, beeves, poultry, pile staves, corn, and cotton were carried down the river, and that it was in 1820 that the first flatboat was launched on the Mulberry Fork of the Warrior River. Concerning iron ore he says: "In Murphree's Valley there are fine beds of iron ore on vacant land within four miles of good water power, also a number of good mill seats, while white limestone, good fire stone, and a good coal bed one foot thick are within one-half mile of the ore beds. Yet with all these advantages for making iron, Blount pays annually for thirty thousand pounds of Tennessee bar iron."

Rev. F. M. Grace writes as follows:

"In the year 1848 an amateur geologist named Hollowell, from the State of New York, examined the iron deposits at Grace's Gap and assured their owner, Mr. B. E. Grace, Sr., that similar ores in the Adirondack Mountains were at that time worth $2,000 an acre. And to assure Mr. Grace of the identity of

these ores he enclosed in a letter a small fragment of the Adirondack ore which I myself examined and found it possessed of the same qualities as ours. It had the same oily feel, and stained the fingers in the same way as our well-known 'dye-stone.'

"Similar knowledge was also held of the value of our 'stone-coal,' as it was then commonly called, to discriminate it from the charcoal used by most blacksmiths where mineral coal was not accessible. But the blacksmith shops at Elyton were constantly in use of the bituminous coal that had been dug and hauled in wagons from the nearest coal beds on Five-Mile Creek, some seven miles west of Elyton on the old Jackson road. The first coal used in this county was not taken from under the ground but from the beds of the streams. The greatest amount was found in the bed of the Warrior River and, long before the war, was raised from the water and shipped in flatboats to Mobile. The mode of raising the coal was very simple. First the boat was built in summer, when the water was low, and then anchored in midstream till it was loaded with coal. The coal was broken loose from the bed of the stream with crowbars and then raised by cranes above the sides of the boat. The loaded vessel was then tied to the shore to wait for a tide which was expected in the winter and spring rains. A fleet of coal boats being collected, the voyage to Mobile began when the river had risen sufficiently to carry these boats over the shoals, some of which were long and dangerous. But the river men were expert with oars and generally made the trip in safety, though the loss of a boat was by no means infrequent.

"About the year 1850 Mr. James A. Mudd, a brother of Judge William S. Mudd, and a very enterprising merchant of Elyton, embarked in the coal business, in the manner above described, and established a coal yard in Mobile. I met him there in January, 1852, at a hotel when he was carrying on a prosperous business.

"In the early eighteen-fifties the Rev. Mr. Parham, of Selma, canvassed Jefferson County in the interest of the Alabama and Tennessee River Railroad, intended to connect Selma and Gunter's Landing, for which purpose the State of Alabama had appropriated a certain per cent of the sale of the public lands. In a speech at Elyton, which I heard, he stated that Sir Charles Lyell, the great English geologist, on landing from a steamboat on the Alabama River, had taken up some of the soil into his hands, and after inspecting it, exclaimed: 'This is the richest soil I ever looked at, but the wealth of Alabama lies in the counties of Shelby, Jefferson, and Walker.'

"In 1855 or 1856, Dr. L. C. Garland, of the State University, canvassed the counties along the line of the N. E. and S. W. railroad (now the Alabama Great Southern) and advocated the building of rolling mills in Jefferson County to manufacture the rails for clothing the road. He had no doubt of the practicability of manufacturing railroad iron from the ores of Jefferson County,

and had the State of Alabama then made an appropriation for this purpose it would have saved the $7,000,000 which it afterward gave Stanton for building the road.

"In the closing years of the war Rev. R. K. Hargrove, now bishop of the Southern Methodist Episcopal church, came to Elyton with a view to purchasing as much of Red Mountain as he could then buy with $30,000. He put up at Roebuck's stand on the Huntsville road (now about Twenty-first Avenue and Twentieth Street) and spent three days in making inquiries about prices of mountain lands. He found that he could buy these lands for about $1,000 per square mile, and could therefore have owned the whole of Red Mountain from Trussville to Bessemer for $30,000. After considering the question thoroughly, the bishop told me that he concluded not to make the purchase, although fully persuaded it would one day be of great value, because, as he said, 'The existence of this ore has been known to civilized men for a hundred years and they have never made any use of it, and it may be another hundred years before they will need it. That will be too long hence to do me or my children any good.' He, like others, had supposed the prosperity of the South depended on agriculture and thought the time might be distant when they would go to making iron!"

Although Walker County was established as early as 1823 from portions of Tuskaloosa and Marion counties, nevertheless, as Joel C. Du Bose writes:

"Settlers were slow to occupy this section of the country because of its remoteness from navigable waters and the consequent difficulties of reaching the market. In 1816 Richard Breckenridge made a horseback trip from some point near Columbus, Mississippi, through this region. His diary gives an account of what he saw and experienced during the two weeks of his lone passage through the wilds without meeting with a human being or discovering any signs of the habitation of white men or Indians. On August 20 he came upon some deserted Indian cabins at the site of Old Warrior Town at the confluence of Sipsey and Mulberry Forks. These were probably cabins that had escaped destruction at the hands of Col. John Coffee in October, 1813, when he attacked and burnt the town.

"After the close of the Creek War emigrants rushed to secure homes in the lands ceded by the Creeks. A little later, after Breckenridge's journey, the hardy pioneers began to settle in what is now Walker County, once the corner of the land possessions of the Creeks, the Chickasaws, and the Cherokees. Among them were some of the soldiers of General Jackson. One of these was Mathias Turner, a noted hunter of bears and wolves and other wild animals. He lived near Lost Creek, a few miles above its junction with Wolf Creek. James, his last surviving son, for many years, was business manager for Captain Musgrove.

"Although Walker County was at first strictly an agricultural section and linked with the commercial world by a dangerous river, the people gave themselves at once to the daring business of flatboating products over the treacherous shoals of the Warrior River to Tuskaloosa, Demopolis, and Mobile.

"Between 1820 and 1830 William Jones went through Squaw Shoals on the first flatboat that ever crossed them. He was the father of Jasper and Pink Jones, two very old men now (1909) living in this county, near the old home place. The boat was loaded with staves and belonged to William Dunn. It was sold with its cargo at Tuskaloosa. For the return trip a keel was bought and loaded with two hundred sacks of salt and other merchandise to be carried up the river to Baltimore. No cable could be found strong enough, however, to pull the loaded keel over the Squaw Shoals. When the most violent rapids were reached the salt would be taken from the keel and carried by hand to a point up stream from which the keel could be pulled with its load. The keel would be reloaded and carried until again checked by the rushing waters. It required ten days to get the keel over Squaw Shoals. When the most violent rapids were reached the salt men of the crew were assisted by two bachelor farmers living near, and they returned the favor by helping to roll logs on the farm. From this early day boats carried annually, coal, corn, staves, and live-stock to the markets in the lower rivers.

"The numerous outcroppings of coal, and the high prices offered for it in the markets made the gathering and shipping of it an important industry. With picks and crowbars it would be dug and prized from its beds on the land and in the bottoms of the creeks and river, and loaded into boats. Labor was needed to get the coal ready for shipment and boats were needed in which the shipments could be made. Daring pilots were also called into service, and many a hair-breadth escape from destruction is related of boats and crews as they passed in the swift rushing waters over the rocky shoals. A pilot and from four to ten helpers formed the crew of a boat. Noted among the pilots were John Bess, James Tuggle, William Payne, James Short, James Patton, William Benson and John Ballenger. The latter was a splendid swimmer, but after piloting many boats safely through the Shoals he lost a boat and was drowned in Squaw Shoals in 1861. James Cain and Stephen Busby were among the first to gather coal from the bottom of Lost Creek and flatboat it to Mobile. They were paid as high as ten dollars a ton for their first shipments. James Cain was active from the beginning in the mining, handling, and shipping of coal on the Warrior and its tributaries, and his friends claim for him that he was the first coal operator in Alabama. William Whitson dug coal out of Wolf Creek about 1837. His first shipments were from the lower sections of the creek, not far from where it empties into Lost Creek.

"The streams were all too shallow for boats during the dry

summer months. During this time there was all along Warrior River and its tributary streams much activity in the gathering of coal, building of boats, working of crops, manufacture of staves, and raising of stock. The average size of a flatboat was seventy feet long by twenty-five feet wide. The average cost of it was seventy dollars, the estimate being a dollar a foot measured in the length. The average size of a keel was sixty feet by sixteen. The boats were loaded in the dry season and when the freshets of the fall season came they were pushed out into the swollen waters and steered down the river.

"The population of the county in 1830 was 2,202. It was ten years later before this number was doubled, and fifty years before it reached 10,000. The people were sturdy, honest, industrious, and independent, and many of them were restlessly striving for business conveniences. The river shoals were always under discussion and study. The continuous reports of the dangers and difficulties in transporting products on the river secured a government contract in 1835 to Richard Chilton and James Cain to clean out Squaw Shoals and direct the current of the waters so that keels and flatboats could pass over them with less danger. The work was duly undertaken, and some good was effected, but the dangers of passage were still so great that the little relief through the government contract work was scarcely reckoned in the course of business.

"The Squaw Shoals are twenty-six miles above Tuskaloosa and they extend seven miles up the river. About seven miles above these are Black Rock Shoals where the last work was done under a government contract on the Shoals in the Warrior River in Walker County. The contract for this work was awarded in 1850 to Robert Cain, son of James Cain, whose bond was signed by John Gurgainus, Sr. The two agreed to take the contract together, and they arranged that one of them would sign the contract and the other would endorse it, thus meeting the government requirements. This work was to dam the waters on the south side and throw them to the north bank, and thereby make a safer channel.

"In the early forties a good deal of coal mining was undertaken. Jacob Gibson and others, across the river from Cordova, raised coal out of the bottom of the river, prizing it up with crowbars and loading it into boats. Jacob Phillips, the Sanderses, the Burtons, and the Gravlees were also engaged in mining coal. William Gravlee, the elder of the family, ran a transportation line of boats.

"Judge William Howlette shipped coal from Bench Field, near the railroad bridge on the side with Cordova. The Bordens also shipped from this neighborhood, mining out further from the river where F. B. Miller is now mining. James Davis, William Robertson, Reuben Morgan, James Hancock, John Sullivan and others dug coal out of the bottom and the banks of the river

near Dora, and also out of the banks and the bottom of Horse Creek and Barton's Creek and boated it in the early forties. Richard Chilton, who contracted with James Cain to clean out Squaw Shoals, shipped boat loads of stock to Mobile. It is said that as the boats reached Squaw Shoals he would show his uneasiness by the anxious expression on his face and by his perfect silence and by his gently scratching his head until the pilot got his boat safely over. About one boat in every eight that passed into the shoals was lost.

"Jesse Van Hoose and James Cain owned the land near the mouth of Lost Creek on which was sunk in 1839 the first coal shaft in Walker County. Gideon, Gordon, and Joe Frierson were in charge of the work and the shaft is known as Frierson's shaft. It is claimed that this was the first active mine and coal shaft sunk in Alabama. A hand windlass was the shaft-lift. It brought up a tub of coal as another was let down to be loaded. T. W. Price, a son-in-law of James Cain, lived near by, and at his home Professor Tuomey found coal which he pronounced equal to cannel coal. Jesse Van Hoose was State senator for Pickens, Marion, Tuskaloosa, and Walker counties from 1825 to 1827. He was a thrifty man and owned interests in a good deal of coal lands. James Cain settled in Walker County territory before it was formed into a county. He was a native of South Carolina, and his wife, Elizabeth Cauley, was also of this State. On a visit to South Carolina he was sandbagged by an Indian. At the time Mr. Cain had in his arms his daughter Elizabeth, now the widow of Major F. A. Musgrove and the mother of L. B. Musgrove, J. C. Musgrove, and Miss Calpurnia Musgrove.

"The records show that Mr. Cain entered lands in 1823 near Wolf Creek and on lower Wolf Creek in 1832. He represented the county in four sessions of the legislature. Mr. Cain was a Whig and was active in State and county politics. The two political leaders of the county were James Cain, a Whig, and General John Menasco, a Democrat. Mr. Cain was a quiet man, with stave plants, mills, farm, ginnery, stock raising, and coal mining as the basis of his business. He was a leader of men, and his election was solely by reason of his natural abilities and his practical services to his times.

"Mr. Cain was born in Edgefield, South Carolina, in 1796, and died in Birmingham in 1887. William Garrett in 'Reminiscences' says of him: 'He was a man of good habits, of very little pretension, and grew largely in the esteem of the public men for the probity and consistency of his character. By industry and economy he had acquired before the war a good property, and was hospitable and charitable in his relations to society. He is a favorable specimen of a class of men who have been aptly styled the bone and sinew of the country. Without the aid of books, he possessed a sound, practical judgment in the every-day affairs of life, doing justice to all men and requiring the same

equivalent. In proportion as his character was understood it was increased in public estimation.'

"Walker County was divided in 1850 by an east and west line. The northern section was formed into Hancock County. Eight years later the name was changed to Winston. Jasper lay on the road from Tuskaloosa to Huntsville, and the travel passing to and fro made it of much importance. It is on land that was settled by Dr. Edward Gordon Musgrove who had emigrated from South Carolina before Alabama was admitted into the Union. Dr. Musgrove gave the land on which now stands the courthouse of Walker County, and he may justly be called the founder of Jasper. He was a successful physician and a classical scholar. He was the first judge of the county court of Walker County. During the trial of cases he sat on a big rock near which is another larger rock on which sat the jury. These two rocks can be seen to-day just outside the yard of the Musgrove home in Jasper. Dr. Musgrove was the father of Francis A. Musgrove, who was first the captain of Company C, Twenty-eighth Alabama Regiment, and who was afterwards promoted to major.

"Major Francis A. Musgrove mined coal before 1850 in partnership with Rufus Jones. This was in Bull Bottom about a mile from Cane Creek. The coal had to be hauled to the water to be boated. Mr. George Shipp Gaines says of Major Musgrove, 'He had much to do with the digging and shipping of coal. He was a man to take charge of an enterprise and move it to success. Breck (Musgrove), his son, has many of his traits and looks like him.'

"Major Musgrove was not only a strong business man, but he was a genial, joyous, companionable associate with his fellowmen. As indicating his humor, it is reported that on one of his numerous trips to Mobile on flatboats, he and his companions had not shaved for some time, and their long beards tempted him to a proposition that all should shave on one side of the face after the fashion of a religious order in the eastern world. He represented that it would put Mobile on the edge of curiosity to know why the strange manner of shaving, and that some wholesome fun would be enjoyed. All on the boat complied. Just before reaching Mobile Major Musgrove managed to finish shaving his face, stepped out on deck with the others, and threw into the river the only razor that was on the boat. The men chased him and threw coal at him as he laughed and dodged until the boat touched the bank at the landing when he leaped ashore and ran up into the city, leaving the others to make their explanation until they could get a shave.

"Judge A. A. Coleman says of Major Musgrove that he was one of the handsomest men that he ever saw. He made a gallant soldier. He was severely wounded at Murfreesboro, and was sent home with orders to enlist men who had not entered the Confederate army. The dominant sentiment of the county was

in sympathy with the Confederate cause, but there was a considerable Union element among the people. Robert Guttery, the county's delegate to the Secession Convention in 1861, was one of the twenty-four members of the convention who did not sign the Ordinance of Secession. A large number of men were not enlisted for war. Drastic measures were committed to Major Musgrove, but he managed so tactfully and so persuasively that he secured, without arresting men, two battalions for active service at the front. One of these battalions was sent to the armies in Virginia and Georgia; the other, Musgrove's Battalion, Major Musgrove led under Forrest to the close of the war.

"The roads leading from Tuskaloosa to The Falls, were continuously traveled by wagons loaded with cotton, corn, and other products for transportation on regular steamboats down the rivers. On their return the wagons were filled with merchandise. Blacksmith shops, grist mills, saw mills, flour mills, tanneries, ginneries, brickyards, and stave and shingle plants were among the industries of antebellum days. Among the most extensive of the mill plants was that of Dr. Moses Camak on Blackwater Creek in Section 15, Township 13, Range 7 west. The native coal was much used in the blacksmith shops, though a good deal of manufactured charcoal was used.

"Mr. Mortimer Corry, John Gurgainus, W. A. Thompson, Claiborne Ballenger, and Captain Felix Hanby are to-day full of reminiscences of their wild trips over Squaw Shoals with boatloads of marketable products."

CHAPTER V

IRON MAKING AND COAL MINING IN TUSKALOOSA COUNTY, 1830–1861

Founding town of Tuskaloosa. Establishment of Roupes Valley Iron Works. Incoming of Daniel Hillman. Connection with early iron making of New Jersey, Ohio, and Kentucky. Certain properties of Tennessee Company, Republic Company, Central Coal and Iron Company, and Birmingham Coal and Iron Company indirectly associated with Hillman venture. Purchase of Roupes Valley Forge by Ninion Tannehill. Records of Tannehill family. Visit of Sir Charles Lyell. Moses Stroup acquires Tannehill Iron Works. History of Stroup family, pioneer ironmasters of Georgia and the Carolinas. Coal mined in Tuskaloosa in 1831. Coming of William Goold. Character sketch of the well-known coal miner and prospector.

THE three counties, Blount, Jefferson, and Walker, received but meager iron supply until the erection, in 1830, of the Roupes Valley Iron Works, known later as Old Tannehill, in Tuskaloosa County. This county, created by the territorial legislature out of the Chickasaw and Choctaw cessions of 1818, was the seat of the new capital of Alabama. Cahaba had followed St. Stephens as political headquarters, but in 1826 gave place to Tuskaloosa, which remained the State capital until succeeded by Montgomery in 1846. The old town of Tuskaloosa, known as the Druid City by reason of the long rows of giant water oaks that brood over its wide and silent streets, stands on a plateau at the falls of the Warrior River. It was first settled in 1816 and was incorporated in 1819. As site of the capital and the University of Alabama it early became an educational center. In an industrial way it served the Hill Country as chief market town and general distributing point. Roupes Valley Iron Works were started four years after the town was voted the State capital.

It seems that in the fall of 1830 an old furnaceman, Daniel Hillman by name, came up to Tuskaloosa County in the interests of Colonel Ralph McGehee of Montgomery. He built a forge on Roupes Creek in Roupes Valley at a point near the meeting lines of the four counties, Tuskaloosa, Jefferson, Bibb,

and Shelby, where a market could be commanded. With the richest pockets of brown ore Hillman had ever come across, within bow shot of the site, with a bluff, water power, good farming ground for the laborers, and plenty of timber for plank and charcoal, he found the makings for an iron works ready to his hand. He set to work at once, and named his forge Roupes Valley Iron Works.

Very little was known about Daniel Hillman in Alabama, but he appears to have been very well liked. Several of his workmen and a number of the neighboring farmers named their sons after the kindly, hard-working old forge builder, so profound was their respect for him. He had come among them, it seems, an utter stranger, under shadow of a grief. He was of Dutch stock. His ancestors had been iron makers for centuries. His father only had deviated from the trade, and, leaving Holland shortly before the American Revolution, had settled with his family in Philadelphia, Pennsylvania. The little twenty-acre patch of ground near the Delaware River where the Continental Hotel and the United States Bank stand at the present time was purchased by the first Hillman family in the United States and here they started the dairy business. The father, however, trained his boys, Daniel H. and James, to the wagon making and blacksmith trade. There were various reverses: the father died, two of the children died, and the little dairy farm was sold for taxes. The two boys went over to New Jersey and they worked hard. After some years Daniel began to prosper at his trade. He got enough capital to set up a plant in 1814 near old Valley Forge; he married, bought a farm, a store, and two schooners. But before his iron works had paid costs, a violent freshet one night uprooted every vestige of them. His partner decamped, leaving a burden of debts, to meet which, Hillman was forced to surrender his every possession.

Once clear, he struck out for the West, riding off on mule back to look for a new iron country. He went to Chillicothe, then the capital of Ohio, and built a little forge on Paint Creek, about 1819, which is one of the earliest on record in Ohio. Two or three years later, after his plucky wife and his five children joined him, the family emigrated to Kentucky, where in Bath County Daniel Hillman put up another forge. With the help of his four sons, Daniel, Jr., James, George, and Charles, every one of whom later made his mark in the iron business of Ken-

tucky, Tennessee, and Alabama, the indefatigable old Dutchman put up, in 1823, his furnace and iron works at Greenupburg, Kentucky, made flatboats, dug coal, and shipped coal and iron to Cincinnati. His wife worked shoulder to shoulder with him and with the boys, and it was a rough life for all of them. Their one daughter, Jane Hillman, married Justus Buck Goodrich, whose son, Levin S. Goodrich, in the year 1876, made the first coke pig iron of Alabama, at Oxmoor, in Daniel Troy's term as president of the Red Mountain Company.

Daniel Hillman was used to working late and early, but when his good wife died the old man lost his grip and some of his impetus to business. Restless, he wandered back to Ohio, where for a few months he managed the Pine Grove Steam furnace at Hanging Rock. Later, with Casting Goodrich and his son-in-law, Justus B. Goodrich, he went to New Orleans.

The Goodriches had a shipment of iron to carry to Mobile. In the harbor there they found a ship disabled for want of a casting. Goodrich did repair work such as surprised the crew. To meet with a skilled iron-master in a wild country like Alabama was a thing most unexpected. For Cedar Creek's record, away off in northwest Alabama, was a sealed book to the southern half of the State.

There were rumors, however, of a mineral region, floating around the old Spanish streets, and Daniel Hillman, always on the scent for an iron country, followed them to Roupes Valley. Here in Tuskaloosa County he gained new courage and strength. A letter from the old iron-master to his son George, dated August 21, 1830, from Valley Forge, Bibb County, Alabama, is as follows:

Dear Son: These lines will inform you that I am well, and I hope that you and your brothers, sister and son, are the same. I shall start one forge for Colonel McGehee in about four or five weeks, and then expect to build a sawmill for myself. I can sell about two thousand dollars' worth of plank. I can cut pine timber on Uncle Sam's land, a practice very generally prevailing in this country. Colonel McGehee will assist me in any way, so I can get him a-going in a short time. He will want material for his furnace which he will commence building about Christmas. I am to superintend the building of it, and immediately afterwards the building of another forge unless something prevents.

I believe, George, that my prospects for making a handsome property are better than they ever were during all the course of

my life. I wrote to Daniel and desired him to come to this country; for there is one of the best prospects I ever saw for him to make a fortune. I shall write to him and give particulars of the prospects. It is as healthy here as in any part of Kentucky.

I have had my health I believe better, for I have gained considerably in weight since I have been here. I hope to come and see you in March, for I can go from here to Nashville in five days by stage, and then take the steamboat.

Give my love to Daniel, Jane and Charles.

From your father,

DANIEL HILLMAN.

Just two years after this the old man took sick and died. Mourned by all of those with whom he had close dealing, he was buried in the little graveyard near Bucksville. His son Daniel came to Alabama late in the eighteen-sixties and bought large mineral properties in Jones Valley which are now owned by the Tennessee Company and by the Birmingham Coal and Iron Company. His grandson, T. T. Hillman, became one of the group of Alabama iron-masters connected with the Tennessee Company, and also founded, with H. E. McCormack, the Pratt Consolidated Coal Company, nearly three generations later.

In reference to the early forge of Tannehill, Baylis Grace writes as follows:

"Several planters with means, among them Ralph McGehee and Richard B. Walker, settled on the north side of the Cahaba River. Impressed with the immense deposits of brown hematite ore in Roupes Valley, they decided to try the experiment of making iron on a cheap scale for the Jefferson County settlers, the nearest market for bar iron being then at Tuskaloosa. The company got Hillman of New Jersey and erected a little furnace on a bold little stream which runs across Roupes Valley and flows into Shades Creek. Here a large hammer propelled by water hammered out the best kind of tough metal and supplied the counties for some distance around with plows, horseshoes, and hollow ware."

The brown ore mines that old Daniel Hillman opened, known as Goethite, are owned and operated to-day by the Republic Company. Also working mines in the immediate vicinity, at present time, are the Tennessee Company and the Central Coal and Iron Company, while the site of Hillman's forge and the ruins of the Tannehill furnace are now owned by the Republic Company.

After old Daniel Hillman's death the Roupes Valley forge lay silent until 1836, when it was bought by Ninion Tannehill, a cotton planter. Colonel Tannehill had come into Alabama in 1818 from South Carolina. His marriage to Mary, daughter of Jonathan Prude of Jefferson County, in 1819, is the first on record in the Old Elyton courthouse. The young couple located in Jonesboro, but after obtaining lands in Tuskaloosa County, they moved there. William W. Tannehill, of Comanche, Texas, a great nephew of Colonel Tannehill, sends the following record:

"The Tannehill family originated in Scotland something more than 700 years since. The family started from a foundling boy, who was discovered early one morning on the side of a hill by an old man and his wife, who were out hunting up their calves. As the little boy was only two years old and could not give any account of himself, the old couple adopted him, and gave him the name of Tannochill, after the name of the hill upon which he was found, and the name has since been changed to that of Tannehill. This is a matter of public records of Scotland.

"During the early settlement of the State of Pennsylvania there came over from Scotland a family of seven brothers by the name of Tannehill, who settled in that State, and one of those seven brothers, whose name was Philip, came down into North Carolina and raised a large family. One of his sons by the name of James coming to South Carolina, also raised a large family, among whom was Ninion Tannehill. When these five brothers became of age they all came to the State of Alabama, settling in different parts of the State.

"Ninion is the one who settled some distance above Tuskaloosa and was the owner of some twenty negro slaves and engaged first in farming and stock raising, but later began the making of iron. In August, 1849, he had his iron factory in full blast at that time and for some time before."

In the year 1846 the great English geologist, Sir Charles Lyell, visited this region. His description is minute and precise.

"Starting in a northeasterly direction," he narrates, "we first entered a hilly country formed of sandstone, grit, and shale of the coal formation, precisely like the strata in which coal occurs in England. These hills were covered with long-leaved pines, and the large proportion they bear to the hard wood is said to have been increased by the Indian practice of burning the grass, — the bark of the oak and other kinds of hard wood being more combustible, and more easily injured by fire, than that of

the fir tribe. Everywhere the young seedlings of the long-leaved pines were coming up in such numbers that one might have supposed the ground to have been sown with them; and I was reminded how rarely we see similar self-sown firs in English plantations. When we had gone about twenty miles northeast of Tuskaloosa, we came to a higher country, where nearly all the pines disappeared, and were replaced by oak, hickory, sumac, gum-trees, sassafras, and many others. In some clearings here, as in Georgia and Carolinas, the quantity of cordage of wood fit for charcoal produced in thirty years by the new growth, is said, from its greater density, to have equaled the wood contained in the aboriginal forest.

"Near the banks of the Black Warrior River, we examined several open quarries of coal, where the edges of the beds have been dug into by different proprietors, no regular mining operations having as yet been attempted. Even at the outcrop the coal is of most excellent quality, and highly bituminous, and I soon satisfied myself that the strata were not of the age of the Richmond coal before described, but were as ancient as that of the Alleghany Hills, or of Western Virginia. In the beds of black shale covering each coal seam, were impressions of fossil plants, precisely similar to those occurring in the ancient coal measures of Europe and America. . . .

"According to Professor Brumby, this coal field of the Warrior River is ninety miles long from north to south, and from ten to thirty miles in breadth, and includes in it some coal seams not less than ten feet thick. It forms a southern prolongation of the great Appalachian coal field, with which I was unacquainted when I compiled my map, published in 1845, of the geology of North America. Its geographical situation is peculiarly interesting; for, being situated in latitude 33° 10′ north, it constitutes at present the extreme southern limit to which the ancient carboniferous vegetation has been traced in the northern hemisphere, whether on the east or west side of the Atlantic.

"Continuing our route into the upland country, we entered, about thirty-three miles northeast of Tuskaloosa, a region called Roupes Valley, where rich beds of ironstone and limestone bid fair, from their proximity to the coal, to become one day a source of great mineral wealth. At present the country has been suffered to retrograde, and the population to grow less numerous than it was twenty years ago, owing to migrations to Louisiana and Texas, and partly to the unthriftiness of slave labor.

"We traveled in a carriage with two horses, and could advance but a few miles a day, so execrable and often dangerous was the state of the roads. Occasionally we had to get out and call at a farmhouse to ask the proprietor's leave to take down his snake fence, to avoid a deep mud hole in the road. Our vehicle was then driven over a stubble field of Indian corn, at

the end of which we made our exit, some fifty yards on, by pulling down another part of the fence."

Captain H. H. Cribbs, who clerked in a store near Tannehill in 1847, recollects that the furnaces were then run on full time, and that there was a foundry in connection with them. The ore was mined at the old Goethite quarries, some three miles distant from the furnaces, and brought first by ox teams, and later transported by a crude tramway, the roadbed of which is discernible to-day. The product was made, he says, into ovens, skillets, and kettles. These cooking vessels were sent in wagons, south, overland to Tuskaloosa, Selma, and many points in the Black Belt.

In 1855 the plant was sold by Colonel Tannehill to the experienced iron-master, Moses Stroup. On the site of the "old-timey-forge" a new plant was erected, whose ruins are to-day known far and wide as the most interesting and picturesque example of the old way of furnace building extant in the South.

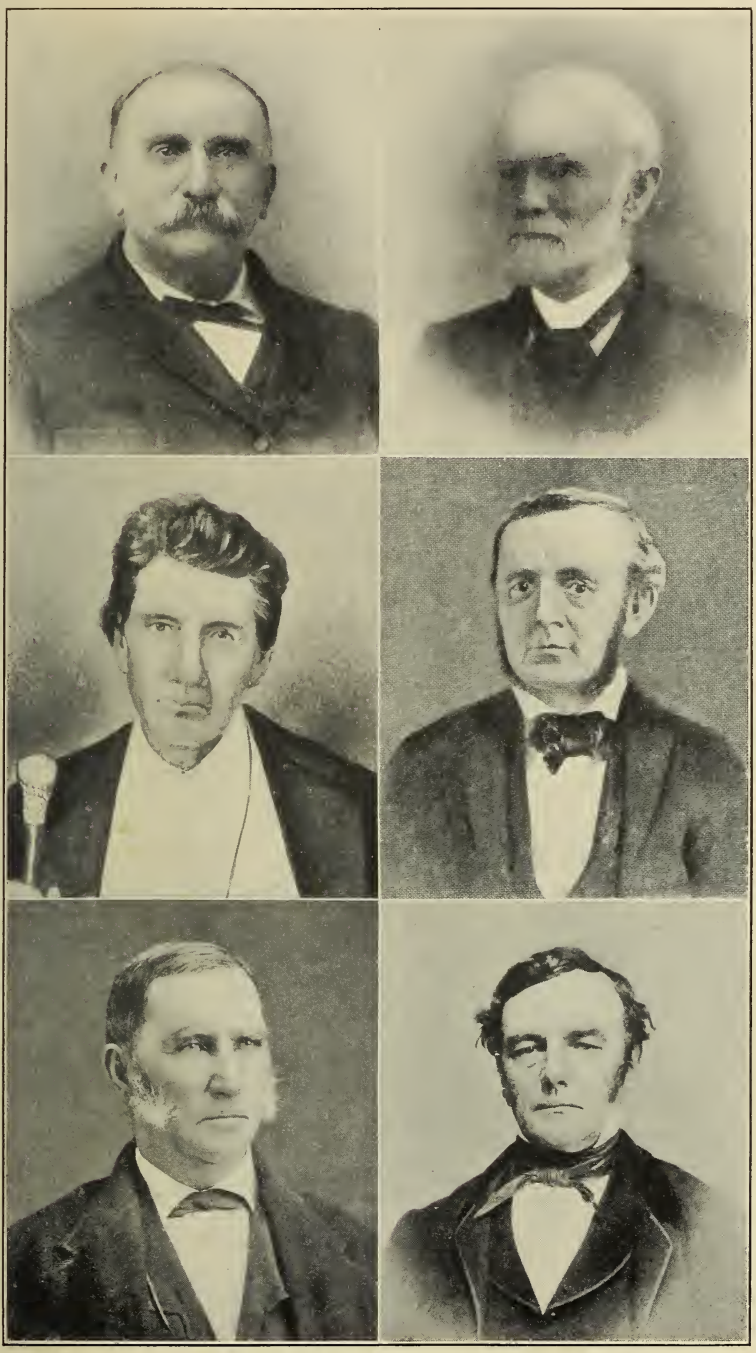
Moses Stroup, before coming into the State, had been identified with iron making in the Carolinas and in Georgia. "He was," Miss Duffee observes, "a remarkable genius in his way. He seemed to be endowed with a natural talent and intense personal fondness for the useful industry he so early chose as his profession, as will be shown by the fact that during his lifetime he built seven different furnaces and five rolling mills." John E. Ware says: "Moses Stroup, at the time of his death, in 1877, was the oldest and most experienced iron maker of the South. He built the first rolling mill in South Carolina, and made the first railroad iron ever made in the South. He became rich in the business."

The Stroup family were iron makers from Colonial days. David Stroup was a soldier and gun maker of the Continental Army. When he left Pennsylvania, after the Revolution, for North Carolina, he took with him, as his assistant, his fifteen-year-old boy, Jacob Stroup. They put up iron works in Lincoln County. From there young Jacob Stroup moved to South Carolina and built the first iron works of that State.[1]

"He was a man of indomitable energy and a great worker," writes his son. "He had no schooling. He was a fine rifle shot

[1] Information received from R. S. Hickman of Ensley, Alabama, and Jacob D. Stroup, Jr., of Hot Springs, Arkansas, only surviving brother of Moses Stroup.

GROUP OF PIONEER IRONMASTERS



1. THOMAS PETER
2. MOSES STROUP
3. JONATHAN N. SMITH

1. HORACE WARE
2. MICHAEL TUOMEY, First State Geologist
3. DANIEL HILLMAN, JR.

and the best judge of men and horses I ever knew. He raised a company during the War of 1812, of which he was captain. He sold out his iron works in South Carolina to Colonel Nesbit, in 1827, leaving my brother, Moses, with Nesbit. They did a large business, casting cannon for the Nullification Party in South Carolina. My father settled in Habersham county of Georgia, in 1828, and built the first iron plant in the State of Georgia. This was before the Indians had left the country. In 1836 he sold out and built another plant on Stamp Creek, Cass County, Georgia, comprising blast furnace, forge, and saw and grist mills. His clerk and bookkeeper for many years was Noah Goode, with whom he engaged, early in the eighteen-forties, to build iron works in Calhoun County, Alabama. I remember the occurrence of the cannon bursting. My father was a great Democrat. He walked a good many miles to vote for Polk. He made much money, but lost heavily in a gold mine. My brother Moses joined him in Cass County, Georgia, in 1843, and bought him out. He then built another furnace at Altoona and was operating this when he died, October 8, 1846."

Moses Stroup, the oldest son of Jacob Stroup, Sr., was born in Lincoln County, North Carolina, in 1794, and was brought up to the iron business. His brother writes: "In those days schooling was not up, and Moses had none, only what he got by pine knot light. But all his life he was a great student, well posted on every subject, and he became a man of fine judgment. He was always a good money maker, but a poor keeper. He did more in the iron industry in the South in his day and time than any other man. His knowledge of the construction and operation of blast furnaces was wonderful."

After Moses Stroup bought out his father in Georgia, he enlarged the plant, built more furnaces, a rolling mill and a flour mill. He took Mark A. Cooper into partnership with him, and in 1847 sold out to Cooper and Wiley. The Cass County plant was then operated by Cooper and Wiley until the Civil War, when it was destroyed by General Sherman. It was at this rolling mill that Moses Stroup made the first railroad iron in the South; it was strap iron, used on the Old State Road, which is now the Western and Atlantic Railroad. In 1848 Moses Stroup came into Alabama. He prospected through Cherokee County and took up several hundred acres of ore lands from the Government. He started building his Round Mountain furnace in 1849, on the site of a forge erected by William Milner, and Henry Milner went into partnership with him.

Moses Stroup tested Red Mountain ore and found it possible to use. There was a bigger demand for his castings, his pig iron, pots, and skillets than he could supply. In Michael Tuomey's report is the following letter from Moses Stroup, dated Round Mountain Furnace, March 18, 1855:

"Round Mountain was first put in operation in April, 1852, and has been in operation most of the time since. It has produced two and one half tons metal per day, and consumed on an average of six hundred fifty bushels of charcoal per day. A portion of the metal is converted into hollow ware and machinery, which is sold in this State, the balance is run into pigs, which find a market in Georgia. The ore used is the red fossiliferous kind. It is taken from the side of the mountain, very near the furnace, where it lies in strata from ten to twenty-four inches in thickness; and is delivered at top of furnace at sixty cents per ton. This ore, when properly treated, makes the best quality of iron for castings and foundry pig.

"The furnace is thirty-two feet high, eight feet in the boshes, and driven by steam power, the steam generated by the waste heat of the furnace, blown by a cold blast. The number of hands employed for all purposes connected with the furnace is forty-five. It is over half a mile from the Coosa River, on which is shipped the pig iron to Rome, Georgia. There is an abundance of good limestone within a mile of the furnace."

A matter spoken of in the correspondence between Moses Stroup and Richard Fell at this time was Stroup's introduction of small machinery to make iron into salable sizes. Early in 1855 Stroup sold out the Round Mountain plant to P. S. Marshall of Eddyville, Kentucky. It then passed into the hands of Captain J. M. Elliott of Rome, Georgia, who rebuilt and enlarged it. It was destroyed in the Civil War, but again rebuilt by Captain Elliott, and the Round Mountain Coal and Iron Company organized in 1870.

The capacity of the furnace was increased to twenty-five tons per day. It made high grade chilling iron, used mainly for car wheels and rolls of rolling mills. It was shipped to Pittsburg, Pennsylvania, to Rome, Georgia, in the early eighteen-seventies and to Gadsden, Alabama, after 1887; was used by the rail makers until the age of steel.[1]

After coming into Tuskaloosa County, and closing his trade with Colonel Tannehill, Moses Stroup began at once the construction of his big group of furnaces. He used slave labor, and

[1] Captain J. M. Elliott, Jr., of Gadsden, Alabama.

cut his own timber, quarried the sandstone, constructing the furnaces by means of skids. He built a tramway to the ore fields, and saw and flour mills. He made plows, axes, fire-dogs, and all kinds of hollow ware. His coaling bed was a mile east of the furnaces. He took John Alexander into partnership.[1]

Machinery was brought from Philadelphia. A flourishing little settlement grew up in the vicinity of the furnaces.

A foundry was built just south of the single furnace and cast sheds and a cast house near the double furnaces. The furnaces were constructed of huge bowlders of sandstone, each weighing four hundred pounds, and the inwalls, bosh, and crucibles were lined with fire brick imported from Stowbridge, England. The stone jacket was fashioned precisely like the early furnaces of England and Wales. A rough log trestle from the high bridge on its near side carried the teams laden with the furnace burden. Something like 3,400 acres of heavy timber were cut down during the life of the old furnaces for charcoal.

"The great difficulty in getting men of capital to come here from the North," wrote Moses Stroup, in 1859, "is, you cannot get them to believe what we say about this country, and they won't believe it is healthy here." In 1862 Moses Stroup sold the Tannehill furnaces to his partner and accepted the position of superintendent and manager of the Oxmoor furnaces in Jefferson County.

Additional records pertaining to this historic plant of Tuskaloosa County will be noted in the war period. Old Tannehill is, perhaps, the most haunting of all the early charcoal furnaces of Alabama. Its ruins still stand in silent watch at the base of a lonely cliff, above Roupes Creek, that slender dark-flowing tributary of Shades Creek. Two massive stacks of solid masonry, builded as the Romans builded twenty centuries ago, great stone on stone — vine-veiled these forty years — are all that is left to-day of Moses Stroup's handiwork. Solemnly the old furnace speaks of the heavy ways of toil, long since dead, that our fathers had before us.

Majestic in the forest, yet ruling no more, it has a burdened, solitary heart. And it is so quiet here; so grave, so still. The very shadows seem to sleep, even as the stones; and the drowsy sun rays circling them are but the brushing wings of evanescent dreams.

[1] A. A. Hanbury of Birmingham, Alabama.

Coal had been mined in Tuskaloosa County as far back as 1831, in the vicinity of the State University[1] and shipped in flatboats to Mobile. It was also sold at the University at four cents a bushel. This is one of the earliest dates recorded in coal operations of the State. Early in the eighteen-fifties a coal miner, William L. Goold, by name, came to this country from Scotland and leased the old coal pits known as Hewell's Mines, and employed some slave labor. "Anthracite coal from Pennsylvania was selling in Alabama in November, 1854, at forty dollars per ton," Goold relates. He says, too, that he started making coke at once, the first coke made in Alabama. This he sold to Leach's foundry for eight dollars per ton, and cut out the anthracite trade.

William L. Goold, or "Uncle Billy," as he is known to-day, was a coal miner's son, born in 1830, near Glasglow, Scotland. He grew up in the mines at Verterville and Sankerton, but he did not earn much beyond a few shillings a week. Just before his wedding day he decided to go to Australia with his bride, and try his fortunes.

"I told Jeannie," said he, "and she said, 'Very well, William, you can go to Australia, if you like, and you can get you an Australian wife. I dinna leave Scotland. So I will stay here and get me a Scotch husband.'" Deciding not to go to Australia, he became Jeannie's husband. But the times were hard. "I could na stand it more," said Goold, "so I decided to come to America. I had Jeannie then. We had our small house and little bit of furniture which we had to sell at auction. Jeannie cried, but my father said to me, 'I glory in y'r spunk, William. I 'd do the same myself, if I were a young mon again!' So I set sail, leaving Jeannie with my parents until I should make a place for her in America."

Billy Goold wandered through the coal regions of Pennsylvania, Virginia, and Maryland. In three years he made enough money to send for Jeannie and the boy. "I had na then seen that boy of mine; just think o' it!" said Uncle Billy. They reached Philadelphia in October of 1854. Goold ran across an advertisement in the *Philadelphia Sun*, calling for coal miners at Tuskaloosa, Alabama, and offering fair inducements. He set out at once for the South. Here his business prospered until

[1] The late John Murray Forbes of Tuskaloosa and Birmingham, Alabama.

hot weather set in. Then everything in the coal business fell into a dead swoon.

The Scotch coal miner drifted from one county to another. He managed the mines near Montevallo, in Shelby County, for the Alabama Coal Mining Company; he opened up the Raglan Mines in the Coosa coal field, in St. Clair County, and sent from fifty to a hundred boatloads of coal a year down to Wetumpka, Montgomery, and Mobile, until the outbreak of the Civil War. Early in the war he acquired seventeen hundred acres of coal lands near Helena, in Shelby County, and sunk a shaft one hundred and thirty feet deep near the Cahaba Bridge and a slope some four hundred feet. He got out seventy-five tons of coal per day, all of which was carried direct to the Confederate Arsenal and Naval Foundry at Selma. His partners in this enterprise were Charles and Fred Woodson. "We operated these mines all during the war, and I would have kept on but Wilson and his raiders destroyed all our work in 1865, and burned me out. Wilson burned three thousand tons of my coal. So after that I sold out and went into the cotton broker's business in Selma."

In a subsequent chapter it is related how Billy Goold went prospecting up into the Warrior Field at the time of the birth of Birmingham and hit upon the famous coal seam, later known as Pratt.

"Michael Tuomey told me," said Uncle Billy, "that if I could ever find the black band seam of iron ore, the State would give me five hundred dollars as a bonus. I looked high and low for it. I found it at New Castle in 1870, but I dinna find trace of the cash."

Uncle Billy made in his day a fair amount of money, but he always sold out, and made for the woods after more coal. His last mining venture was in Tuskaloosa County in 1892, and here he lost out. A little later his house caught fire, and all was lost. "Even my hat was burned up," said the old man.

CHAPTER VI

BIBB AND SHELBY COUNTIES, 1820–1861

Pioneer forge and furnace builders. Character of operations. Exhibit of Bibb County blooms at Sydenham exposition. Biography of Jonathan Ware. Reminiscences of Camp's Bloomery. Sketch of Jonathan Newton Smith. Discovery of coal near Daileys Creek. "Stones on fire!" Origin of one of Galloway Coal Company's mines. Story of Old Uncle Joe. Description of Brighthope furnace. "There 's enough ore around here to run a hundred furnaces a hundred years!" Work of William P. Browne and Robert Thomas. Present day appearance of Brighthope ruins. Horace Ware, "Chief of the early iron-masters." Early records of Shelby Iron Works. Facts and figures of blast furnace practice in eighteen-forties. Construction of Shelby Rolling Mill.

THE first iron making operations in Bibb and Shelby counties circle mainly about the names of Jonathan Ware, his son Horace Ware, termed by Senator John T. Morgan, "chief of the early iron-masters of Alabama," Jonathan Newton Smith, James Camp, William P. Browne, Robert Thomas, and the Mahans and Fanchers.

There are in these two counties records of twelve separate iron works established before the war; two furnaces, "Shelby" and "Brighthope," a rolling mill in Shelby County, nine forges or bloomeries; Thompsons Mill forge, Camps bloomery, Adams dam forge, the Little Cahaba forge, Six Mile forge, Hills bloomery, Wilsons Creek forge, Wier and Scotts bloomeries, and the Camp Branch forge. From the early eighteen-thirties until the eighteen-sixties, these counties, together with Talladega, were the most active in the State in the making of iron blooms.

Early coal operations on a slightly more advanced scale than those recorded of Tuskaloosa and Walker counties were likewise centered here, especially around Montevallo. In 1850, in Shelby County, there were two hundred men in the coal trade.

Generally speaking, these operations in both coal and iron were of the crudest and most elementary character and at no time to be confounded with the present-day processes. The crude character of construction, however, did not apply to the rolling mill erected and owned by Horace Ware in 1859. This rolling plant

of twelve tons daily capacity of merchantable bar iron was as up-to-date in its construction and operation as like enterprises in that day and time, in the North. The mill was complete in plan and equipment, and in addition to many sizes of wrought bar and plate produced, it turned out Alabama's first iron cotton ties, in 1860.

An item furnished by Mrs. Jesse Mahan is that, in 1851, her father-in-law, Edward Mahan, together with Jonathan Ware, sent an exhibit of iron made at one of their Bibb County forges, to the great exhibition at Sydenham, England, where it took first prize among the specimens of charcoal iron blooms from many quarters of the world. There was another exhibit of Bibb County iron at the Vienna Exposition in 1878. In an earlier chapter allusion was made to the settlement of this portion of the mineral region at Mahans Creek, or Brierfield, by a group of Andrew Jackson's smiths and wagon makers. Bibb County, established under name of Cahaba County, in 1818, was early found to be rich in brown ore, coal beds, fire clay, and timber.

The members of the Mahan family induced Jonathan Ware, a New England iron-master, then located in North Carolina, to come to their settlement and build a forge. This, situated on Shoal's Creek, and known as Thompsons Mill forge, was put up in 1820–22. It was removed to Wilsons Creek, near Montevallo in Shelby County, in 1825, and is among the few enumerated by Leslie as existing in that year.

Jonathan Ware was originally from Needham, Massachusetts, where he was born in April, 1782. He had worked in various localities in Massachusetts, New York, and the Carolinas, taking his family with him as he pioneered in the several States. At the time he located in the Carolinas, the manufacture of bar iron in bloomeries was the main line of the iron industry. Ware became an expert hand in this primitive enterprise, and trained his son, Horace, to the business. In his work in Bibb and Shelby counties, he was associated from time to time with Mahan, Camp, Clabaugh, Smith, Fancher, and others. He died at Salt Creek furnace, in Talladega County, in 1864.

Records of James Camp's bloomery have been received from his daughter, Mrs. Louisa M. Rockett of Fort Worth, Texas.

"It was in the year of the great fall of stars," writes Mrs. Rockett, "that Jonathan Ware and James Camp, my father, were camping out on Schultz Creek, and saw that strange hap-

pening. Whenever, after this, my father mentioned the old charcoal forge that was given his name, he said it was begun when the stars fell. Jonathan Ware was its builder and original owner. It took him two years to gather material and construct the works which went into operation in 1835. A. M. Lathrop then bought it, and added improvements, but did not make it pay. My father bought it from Mr. Benson, superintendent of the Scottsville cotton factory, and ran it for nearly twenty years, until his death in 1858.

"The forge was run by water power, and the ore crushed by big wheels. When the ore had melted into a large mass of red hot iron it was placed on the anvil under the great upraised hammer. The hammer man usually had a short bar of iron heated red hot, which he welded into the big burning mass with sledge hammers. Then the big hammer, run by water, pounded the iron into marketable shape. It took several reheatings before the bar reached the required shape, length, and thickness. My father got his iron ore near Tannehill, fifteen miles away, at first. But he soon found all he could use right on his own farm. He found a ready market for his bar iron, from nearby and from distant places. Tuskaloosa and Marion were chief markets.

"I was born near the forge in 1834, and my first recollections are of big piles of bar iron stacked all around our back yard. My memory supplies me with many facts brought from this, the sweetest period of my life — my youth. I remember how every year, beginning with the late forties, the State geologist, Professor Tuomey, used to visit my father, who acted as his guide. My father knew the lay of the land like a book. The country was then a great hunting ground for bear, deer, and turkeys. My father carried the idea that coal would, in time, be found all over the land. Professor Tuomey saw a great future for that section. Some things said, however, come to my mind as a wavering memory, too dim to be affirmed.

"My father was born in Pendleton District, South Carolina, in 1791. He entered Alabama with his wife in 1819, and settled first on the Cahaba River. Later he took up land on Schultz Creek. Circumstances made him a farmer. Nature would have made him a geologist and a mineralogist had he but had the advantages necessary to develop his gifts. He was public-spirited, jovial, sociable. His latchstring always hung outside. He always voted the Democratic ticket."

After James Camp's death the forge was sold to Samuel L. Hamlet, but it was not operated by him. David M. Scott says:

"The forge pond was two miles below Scottsville on Schultz Creek, the same creek that furnished the motive power to run the Scottsville cotton and woolen factory, which was built by my father, David Scott, in 1836."

Mention of Camp's bloomery is also made by Tuomey.

Three forges located at Adams Dam, on the Little Cahaba, and at Six Mile were put up by Jonathan Newton Smith. It was to his Little Cahaba forge that Baylis Grace brought his load of Red Mountain ore and there demonstrated it could make iron. Six Mile is still spoken of. "Men are living to-day," remarked Frank Fitch, the son-in-law of J. N. Smith, "who hauled iron in wagons from this forge to Perry County and into Mississippi."

Concerning Jonathan Newton Smith, Mr. Fitch furnishes the following biographical sketch:

"Jonathan Newton Smith was born at Sparta, Georgia, in 1814. His father, Abington Smith, a planter and mill owner, came with his family into Alabama in 1823. Jonathan Smith became active in business affairs when a youth, serving as sheriff of the county, late in the thirties. He engaged in making iron with the forges or bloomeries then prevailing, and became identified with five iron works, three forges, a furnace, and a nailery on the Little Cahaba River and its tributaries. He had a woolen mill and grist mill and bloomery on Six Mile Creek, four miles from his plantation home. Mr. Smith's plantation of more than two thousand acres was on the Little Cahaba River. He raised in a season over two thousand bushels of wheat and carried on the flouring mill at Six Mile. He represented Bibb County in the legislature in the trying time of carpet-bag horror, and he strongly advocated the purchase by Alabama of the Florida extension between her and the Gulf. It is to men like him that Alabama is indebted for her development before the Civil War, and her wonderful restoration following. Before any coal mine was opened in the Cahaba field, Mr. Smith acquired thousands of acres of coal lands and endeavored to call attention to the importance and value of that field of coal. He attracted men of science, and men of wealth and enterprise. His plantation home was headquarters for statesmen, prospectors, geologists, and early iron-masters. Hunting parties for deer in the Cahaba hills made his home the starting point for camp hunts, and his teams, tents, and camp outfit supplied all requirements."

Mrs. Frank Fitch, the daughter of Jonathan Newton Smith, relates that once in the late eighteen-twenties, her father and a boy comrade, Pleasant Fancher, were out on a camp hunt over to the Big Cahaba. They pitched camp near a branch emptying into Daileys Creek. They gathered some stones out of the bed of the creek to put under the logs of their big fire; they cooked supper, and turned off to sleep. In the middle of the night

Newton Smith woke up and was alarmed to find the stones they had picked up on fire. He woke the other boy, and, frightened out of their wits, both lads cleared out, and tramped home before cockcrow. Long years afterward Mr. Smith would tell his children and his grandchildren of this, the discovery of coal in that section.

The stream out of which the boys gathered the rocks was later named Coal Branch. The precise locality is in Section 11, Township 21, Range 5, west, and the mines of Garnsey, operated today by the Galloway Coal Company, are located here. Mr. Fitch recounts the story of one of Mr. Smith's old slaves, Uncle Joe Smith, who was trained by Jonathan Ware, and at the time of this writing is ninety-three years old.

"While yet a young man, Uncle Joe was bought by Jonathan N. Smith at a sale of the estate of a Mr. Watson of Georgia, for the sum of three thousand dollars, gold value, for he was then an expert hammerer of iron. When the slaves were freed, Mr. Smith set Joe up for himself on a quarter section of land, on part of his large plantation. The place is still owned by the heirs of J. N. Smith, who, for many years, have supported Uncle Joe and his faithful and circumspect wife.

"When Joe was eighteen years old he had been apprenticed by his first owner to Jonathan Ware for five years, and taught the art of hammering iron, for it was an art, and but few acquired it. The forge where Joe first worked for Mr. Ware was located about two miles west of Montevallo in the edge of Shelby County, on Shoal Creek. It appears that a Mr. Lindsey built or owned the forge. It was located there because of the water power used for blowing the forge. That location has since the war been known as Thompsons Mill. As Uncle Joe says, he was eighteen years old when he first hammered iron there. How many years before that date the forge had been worked he cannot say.

"Wisinger and Riddle had built a forge on the Little Cahaba, about two miles from Jonathan Ware's forge, many years before Jonathan Ware came to Alabama. This was about half a mile above the plantation residence then owned by Abington Smith, father of J. Newton Smith, and owned by the latter up to the time of his death in 1885, and since by his children. Riddle sold his interest to a Mr. Clayborn, and our Uncle Joe hammered iron there after that. It does not appear just what interest Abington Smith had in this forge; but the location was on his plantation, and J. N. Smith afterwards sold it to one of his ex-slaves, named George, who used the water power to run a corn mill and gin; the place for many years has been known as Georges Mill."

Professor Tuomey's designation of a "high furnace recently erected in Bibb County" evidently applies to Brighthope. "Its operations," he states, "were confined to the manufacture of pig iron and hollow ware; the blast is urged by steam power, the boiler is heated direct from the trundle head. It is convenient to a good quality of ore and abundant fuel. It cannot fail of success."

Mrs. Fitch recalls that a scientific man passing through that immediate section long ago said: "There's enough ore right around here to run a hundred furnaces a hundred years." So they named the spot Brighthope. The furnace was built and operated by William P. Browne, who was also one of the early owners of the Montevallo coal mines. Mr. Browne, a lawyer by profession, was born in Vermont in 1804. In the eighteen-thirties he took a contract to construct canals at New Orleans and Mobile, and settled permanently in Alabama. He served in the State legislature in 1846, and shortly after that year moved into Shelby County. His home was, for a time, in a log house at the Montevallo Mines, and it was there that his son, Cecil Browne, now a lawyer of Talladega, was born in the year 1855. William P. Browne sold his mines to George O. Baker of Selma during the latter part of the Civil War, but continued to operate them himself under lease, until his death in 1868. He was under contract with the Confederate Government to furnish coal to the Selma works, when Alexander K. Shepard was associated with him in the management of the Brighthope furnace and mines.

Robert Thomas, known as Uncle Bobbie, was a Welshman, and one of the pioneer furnacemen of Georgia. "He built a puddling furnace on Altoona Creek in Cass County in the eighteen-thirties," says A. P. O'Neal. He entered Alabama with Jacob Stroup and Noah Goode when they put up the Cane Creek iron works, and was identified with iron making and furnace building in Alabama, mainly in Bibb and Shelby counties, from that time on. Mr. Thomas died in Coosa County, Alabama, in 1892.

The ruins of Brighthope furnace may still be seen. After a drive of some fifteen miles through the Cahaba Hills — and rough going it is — one turns off the Piper and Six Mile Road into the woods near Brownes Dam.

No house or dwelling of any sort is near and one thrusts his way over rocks and through underbrush man high, making for

the river. Huge dead cedar tops, cut years ago by woodchoppers and let lie, entangled with wiry muscadine and briers and brambles bar the way. Not since 1865 when Wilson's raiders marched by and burned as they tramped along had human beings been to the spot. The banks of the Little Cahaba are high and precipitous. At the point where the water has a natural fall of some two and a half feet, the river carves through a mass of solid rock in which steep steps have been hewn. This is the site of Brownes Dam, once one of the seven wonders of Bibb County, and called, "the most powerful dam ever built." It was fashioned out of several tiers of great, solid hewn pine timbers, fourteen by fourteen, their bases resting against the seats cut in the rock on each side of the river, and fastened together with huge iron bolts. The whole made the figure of a beautiful arch, bowing up stream and meeting mid-way on a tiny little rock island below the shoals. It also served as a footbridge in the old days. It was intact until just after the war "and would have lasted forever," said Frank Fitch, "but some parties interested in fishing destroyed it." About one hundred and fifty yards below Brownes Dam are the ruins of the Brighthope furnace. They hide in the shadow of the bluff, and lie quiet, embraced savagely by the forest. There are two hollow stacks, one twenty-three feet in height, the other nearly nineteen, built of medium-sized sandstone blocks, with arches like those of Tannehill. Cedars, walnuts, water oaks, and the sweet gum range around them. The sound of the river makes the place seem very far away. Traced directly, it would, perhaps, be not more than three hundred yards from the road.

The moment one stepped across from Bibb County into Shelby, at this early period, he would be confronted by the sturdy and courageous figure of the iron-master, Horace Ware, fruit of whose labors exists at the present day in certain properties of the Alabama Consolidated Coal and Iron Company, of the Shelby iron works, and in the Anniston and Sheffield districts of Alabama as well as in the State of Texas. Mr. Ware died in 1890 at his home in Birmingham after a service of nearly sixty years in the iron business. He was born in 1812, at Lynn, Massachusetts, the cradle of the iron industry of North America. In building several of the early forges of Bibb County, he was the first assistant of his father, Jonathan Ware, whose history has

already been given. At the age of sixteen he became his father's partner in business, and at twenty, bought him out. Horace Ware purchased virgin lands at Shelby in 1841, and completed his blast furnace in 1846. Of a reticent disposition, he was practical, energetic, a fine, manly spirit. "He was pioneering all his life," his widow said. "I remember, even in driving anywhere he always took the roughest places in the road because, he used to say, nobody else would take them, and they must be smoothed down." Mrs. Ware, whose marriage to the pioneer iron-master occurred in 1863, some time after the death of his first wife, was Mary Harris, one of the earliest women writers of the State.

In the beginning Mr. Ware had less than one thousand dollars working capital, and credit in those days was not so ready and comprehensive as now. Notwithstanding his limited means and the never ending embarrassments which naturally would confront every such pioneer enterprise in a new country, he had within fifteen years established an active manufacturing plant consisting of an eight-ton charcoal blast furnace, a twelve-ton merchant bar rolling mill, a large saw mill, grist mill, cupola and foundry, blacksmith and wood shop, and comfortable homes for more than three hundred people. Besides all this, he had established what he considered most important of all, a good church and schoolhouse.

In the forties and fifties — in fact up to the commencement of the war in 1861 — securing and controlling skilled and common labor for furnace purposes was difficult, and frequently our little pioneer iron industries were idle for the lack of help. At Shelby, Horace Ware sought to provide against this trouble, and, owning a few slaves, he selected several of the most active and intelligent of the number and trained them in the different lines and departments of furnace work. "For instance, Berry was trained to the duties of foundry-man, Charles was skilled as a collier, Anderson as furnace engineer, Clark as chief coal teamster, others as top fillers and keepers, and Obediah was given the task of making and keeping in repair the white oak baskets necessary to handle the charcoal. These were duties in lines of work very unusual for negroes in that day when agricultural labor claimed the great body of them. They proved faithful and efficient in these places of responsibility, and when they became free after the war, their knowledge of such work stood them

well in hand, and they easily secured remunerative employment with furnace operators. As they were true and faithful in slavery, so were they loyal and respectful to their old master in their days of freedom, and the bond of mutual regard, the warmest esteem, remained to be broken at the grave, and under the rule of Providence it was for Mr. Ware to follow each one of his ex-slaves to their last resting place, and often he gave them help and comfort in their declining years." [1]

As heretofore stated, Horace Ware, in the eighteen-forties, erected a small blast furnace at a point in Shelby County, — Shelby iron works, which is still known by that name.

"The old stack, constructed of brick and rough stones, was located at the foot of an ore hill, thus avoiding the necessity of a costly hoist for the stock. It was about thirty feet in height, with three tuyère arches, and a front arch for cinder and metal opening. The hearth and crucible were lined with sandstone blocks dressed to proper shape, and in the bosh and lining were used firebrick made of clay obtained in the neighborhood of the furnace; the hearth sandstone was quarried in the hills some twenty miles away. An old steamboat engine was used for blowing purposes, and this, together with two old-fashioned horizontal blowing cylinders and other necessary castings and equipments were gotten in Rome, Georgia, and rafted down the Coosa. The daily capacity of the furnace was from four to six tons of strictly first-class cold-blast pig iron, and the fuel for smelting was charcoal manufactured in the old time straw and dust pits from pine timber surrounding the plant. The pits held about thirty cords of wood, and after a slow burning of ten or twelve days, would yield about one thousand bushels of good furnace charcoal — much better in fact than the coal product from the brick ovens largely used nowadays.

"The ore was mined with pick and shovel, being heavily deposited from surface to an undeveloped depth, and the mine openings not more than three hundred yards from furnace top. One cubic yard of earth carried about one ton of mineral. The full ore requirement — say ten or twelve tons daily — was delivered on the furnace stock bank by the service of one mule and cart, and old 'Mike' was so faithful, and became so familiar with his work that he pulled his load and brought back his 'empty' without the direction of a driver. This was a manner of delivery and a minimum of quantity quite in contrast to the long train of fifty-ton cars required to fill the yawning abyss of our present day furnaces.

"On the stock yard near the furnace a foundation of dead

[1] John E. Ware of Birmingham, Alabama, son of Horace Ware.

wood called 'bank wood' was laid, and on this an open kiln was built with alternate layers of dust coal and ore, and when one hundred to two hundred tons were accumulated, the kiln was fired and left to burn slowly from bottom to top for ten or twelve days. This process separated the dirt from the ore, cleaned it of water and volatile impurities, and so far as practicable the ore was charged into the furnace hot from the kiln. This greatly improved the ore, and materially lessened the quantity of fuel required for smelting. The limestone flux and ore donicks were reduced to proper size for furnace use by being sledged through two-inch grate bars by hand, as against the giant jawed steam crushers used now. Pure freestone water, the very best for boilers, was conveyed by means of a line of twenty-foot pine logs bored through from end to end and joined, which was a crude makeshift in comparison with wrought and cast conveyances of modern practice. The ore, fuel, flux, sand, and water were all contiguous to the plant, and easily obtained. It was an ideal site for the manufacture of iron, but for its great distance from market and the absence of ways and means of transportation. This latter objection, or lack, was not considered against the location, as the waters of the Coosa River passed by some eight miles to the east, and its broad bosom afforded aid in the matter of transportation to distant consumers.

"For many years — in fact, until 1857–58, when the Alabama and Tennessee Rivers Railroad reached Columbiana — all the pig metal not converted at these works into hollow ware and various kinds of castings and sold to farmers and merchants in Shelby, Talladega, and Jefferson counties, was hauled to the Coosa River by wagon and boated down on crude rafts made for the purpose to Montgomery and Prattville, and by steamboat to Mobile. Far away markets and high freight rates to reach the same have been forbidding barriers, and served to make our progress slow, and at times unprofitable since first we began, more than seventy years ago. The most perplexing question of all was how to get rid of the production advantageously and acquire the quick means with which to meet the daily cost of disposing of five or six tons of iron. Furnace owners in those days in the South had no bank account, and but very little capital. The cost of production was as follows:

For ore	$2.00
For charcoal	10.00
For limestone.	.75
For labor.	3.00
For repairs, etc.	1.00
Total	$16.75

"This appears high now, but was considered very reasonable in 1847, when the methods were crude and every appliance simple,

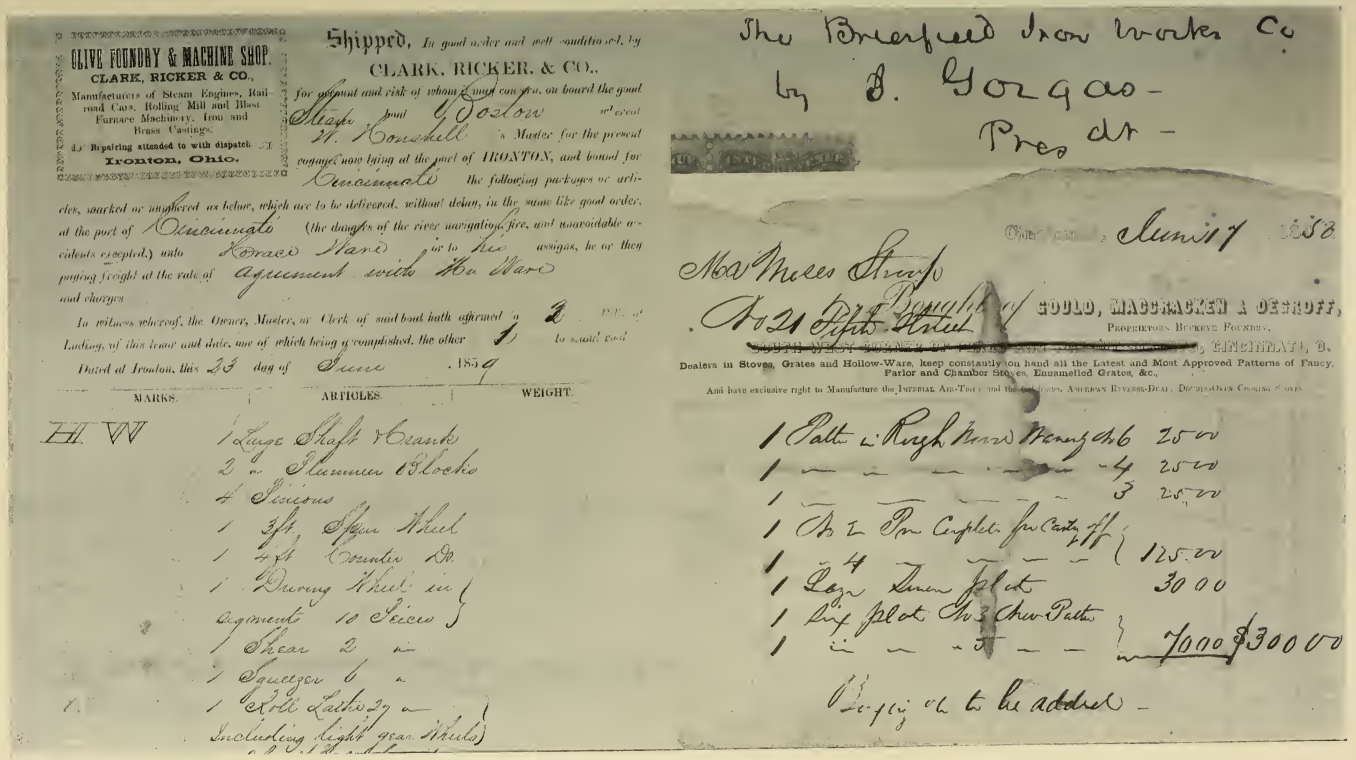
and necessarily expensive. The proximity of all the raw material, and the pure, easily reduced, sixty-five per cent yield ore kept the cost within this limit. To get this sum per day was not an easy problem to solve, and embarrassments and hardships were met and contended with which are altogether unknown in this day and time among furnace operators, who have skilled men and ready means, wide credit, and anxious markets at their command.

"The Shelby management coped with the conditions, dire though they were, and floated a portion of the product down the Coosa, and obtained the necessary cash. The balance was molded into hollow ware of many kinds, and classes, including cooking utensils, heating and cooking stoves, dog irons, sash weights, boiling kettles, cast plates, etc., and the same was wagoned throughout the adjacent country and sold and bartered to individual customers and merchants whenever and wherever they could be found, for money, if perchance it was to be had; for merchandise and country produce if more convenient.

"In this simple fashion work progressed at Shelby for several years, and the iron gave such general satisfaction as to lead to the idea that ores so very low in phosphorus and sulphur and so high in metal should be manufactured at home, and utilized in wider fields of industry than was possible in the rough cast. So, in 1854, under the superintendency of Robert Thomas, a skilled and experienced English iron worker, a small forge was put up on Camp Branch, three miles west of the furnace plant, and the Shelby pig iron was reduced to wrought blooms for further testing purposes. A small lot of this wrought product was shipped by Mr. Ware to Sheffield, England, in 1856, where he had it manufactured into steel, and then into the finest of cutlery, including knives, forks, razors. Alabama iron was enthusiastically endorsed by the steel manufacturers for high grade steel purposes. Shelby furnace and its product ranked high in quality and importance from its first day's cast of pig metal, and it is the only iron-producing locality that has remained in almost constant commission from the period of its founding to the present time. From 1846 to 1862 it was owned by Mr. Horace Ware; from 1862 to 1867 by a company of Alabama stockholders, of which he was a member; from 1867 to about 1890 by a company of Hartford (Connecticut) and Alabama stockholders, and since then to the present by New York capitalists, and for the past fourteen years it has been under the personal supervision and control of Colonel T. G. Bush, of Birmingham.

"An instance going to show how readily the early make of the Shelby furnace recommended itself to the consumer, was about 1852 when a sample lot of pig metal was sent to foundrymen in Columbus, Georgia. This was tested in a competition with iron from Georgia and Tennessee, which was then supplying their market. It gave better results, and an order for one thousand

Signature of General Gorgas, Chief of Ordnance of the Confederacy



OLIVE FOUNDRY & MACHINE SHOP.
CLARK, RICKER & CO.,
Manufacturers of Steam Engines, Railroad Cars, Rolling Mill and Blast Furnace Machinery, Iron and Brass Castings.
Repairing attended to with dispatch.
Ironton, Ohio.

Shipped, In good order and well conditioned, by CLARK, RICKER, & CO.,
for account and risk of whom it may concern, on board the good boat Steam Boat G Boston whereof
W. Horshell is Master for the present voyage now lying at the port of IRONTON, and bound for Cincinnati the following packages or articles, marked or numbered as below, which are to be delivered, without delay, in the same like good order, at the port of Cincinnati (the dangers of the river navigation, fire, and unavoidable accidents excepted,) unto Horace Hare or to his assigns, he or they paying freight at the rate of Agreement with Mr Hare and charges.

In witness whereof, the Owner, Master, or Clerk of said boat hath affirmed to 2 Bills of Lading, of this tenor and date, one of which being accomplished, the other 1 to stand void.

Dated at Ironton, this 23 day of June 1859

MARKS.	ARTICLES.	WEIGHT.
H. W.	1 Large Shaft & Cranks	
	2 " Plummer Blocks	
	4 Pinions	
	1 3ft Spur Wheel	
	1 4ft Counter Dr.	
	1 Driving Wheel in 8 segments 18 Feet	
	1 Shear 2 "	
	1 Squeezer 6 "	
	1 Roll Lathe 27 " Including light gear Wheels	

An old Bill of Lading, 23 June, 1859

The Brierfield Iron Works Co
by J. Gorgas -
Pres dt -

Mr Moses Strouse
Dr to GOULD, MACKRACKEN & OESTROFF,
Proprietors Buckeye Foundry,
CINCINNATI, O.
Dealers in Stoves, Grates and Hollow-Ware, keep constantly on hand all the Latest and Most Approved Patterns of Fancy, Parlor and Chamber Stoves, Enamelled Grates, &c.,
And have exclusive right to Manufacture the Imperial Air-Tight and the [illegible] American Revers-Heat, Double Oven Cooking Stove

1	Patt 1 Right Hand Wing	16	25 00
1	" " " "	14	25 00
1	" " " "	13	25 00
1	Pr 2 Pcs Cupolas for Casting		125 00
1	Lge Linen Plate		30 00
1	Sup Plate for Chew Patts		7000 $300 00

Shipping to be added -

A Bill of Machinery for Round Mountain Iron Works

tons was given at thirty-six dollars per ton, other iron selling for several dollars less. Up to that time — in fact up to 1861 — this was probably the largest single order booked for iron manufactured in Alabama, and it required nearly one year's output of the furnace to fill it.

"Prior to this date, to wit, in 1858–59, Horace Ware had built at his furnace at Shelby a large rolling mill with a capacity of twelve tons of heavy and small-size finished bar iron. This was the first and parent rolling mill plant for Alabama. The enterprise was entered into by Mr. Ware in 1858, before the war was really anticipated, and in 1859 he completed the plant, and in December of that year made the first heat in his puddling furnaces. On April 4, 1860, the mill engine was started and all the machinery properly adjusted, and on the 11th of April, 1860, this mill turned out Alabama's first day's product of finished bar iron, the beginning of an era in her history as an iron manufacturing State."

CHAPTER VII

PIONEER IRON MAKING IN NORTHEASTERN ALABAMA, 1830–1861, AND FIRST STATE GEOLOGICAL SURVEY

Nine iron works in Talladega County. Judge Miller's reminiscences. Maria forge and foundry established by Dr. Moore. Early record of some of Alabama Consolidated Coal and Iron Company properties. Purchase of Maria by Riddle Brothers. Minute description of plant by Walter D. Riddle. Erection of Rob Roy and Eagle forges. Blast furnace on Choccolocco Creek. Operations in Calhoun County. History of Cane Creek iron works. Judge Randolph's account of early iron making. Getting over Waxahatchee Shoals. J. H. Weatherly's recollections. First tragedy of the mines of Alabama. Record of Hale and Murdock furnace in Lamar County. Biographies of Abraham Murdock and of Harrison Hale. Association with early industrial history of Mississippi. Sum total of antebellum operations. Main service as forerunner of future development. Pig iron prices from 1849 to 1861. Appointment of first State geologist. University of Alabama supplies funds. Biography of Michael Tuomey. Association with other States. Results of first report. "Alabama may possibly have another industrial future besides growing cotton."

OF the picturesque country northeast of Bibb and Shelby, the three counties of Talladega, Calhoun, and Cherokee mainly concern these chronicles. There were in Talladega County nine iron works all told — eight forges and one blast furnace — in operation during antebellum days. Of these, the Maria forge, erected in 1836, was the first and Eagle forge (1846), the second. Then followed in successive order: Cheaha Creek foundry (1846), Robert Jemison and —— Hunter; Riddles Mill foundry (1848), Edward Spang and Dr. William Summers; Fain's Creek forge, Silas and David Garrigus, A. W. Bowie, Major Walker Reynolds, John T. Ragan; Clairmont Springs forge (1850), —— Amerine; Rob Roy forge (1852), George M. Riddle, John Moore, ——— Curry and ——— Parks; Chinnebee forge (1852), Silas Garrigus; the Knight furnace (1854), J. L. Orr and William Craig Orr.

According to Judge G. K. Miller of Talladega, whose recollections extend back to the eighteen-forties, nearly all of these early forges were situated on Talladega Creek and the iron generally in use throughout that section of the country was the

product of these forges. The iron was distinguished for qualities of strength and softness and was especially adapted for the making of plow-points and the tips of horseshoes. The ore worked in these forges was in large measure obtained from the deposits of brown hematite six miles east of Talladega, near the present day Ironaton furnaces operated by the Alabama Consolidated Coal and Iron Company. The chief market towns of the old days were Wetumpka, Alabama, and Augusta, Georgia.

Concerning the establishment of the Maria forge, Professor Tuomey notes its beginning by J. M. Moore, Esq., in 1836. According to Mr. J. L. Stockdale, Dr. John Moore, a practicing physician in early days in Talladega, conceived the idea of building a foundry, or plant for recasting scraps, or pieces of old and useless iron into something of value.

"Dr. Moore was the pioneer in this section, and he began by gathering up a lot of old iron, such as broken grates, kettles, and other domestic vessels, old plows, horseshoes, and everything he could find of that nature as a basis for his new foundry. The early files of *The Talladega Reporter,* which was established in 1843, will show the prices of iron being therein quoted at from six to ten dollars per hundred pounds. He selected a site for his plant on Talladega Creek, and secured the land in Section 17, Township 19, Range 6 East, Coosa Land district.

"He got the dam about half completed when he sold his plant to Walter D. Riddle, who bought it with the intention of connecting with it a 'forge.' Mr. Riddle's two brothers, Samuel and John, united with him under the name of Riddle Brothers for the purpose of 'building a forge and for the manufacturing of iron from the ore beds, lying in the adjoining country.'

"They then leased from Stephen Atkins the mineral rights of iron ore in the N E¼ of Section 33, Township 18, Range 6 East, where Washer No. 7 and the storehouse of the Alabama Consolidated Coal and Iron Company now stand.

"They built and equipped the plant for a forge, or furnace, — I think they had three, — and manufactured iron from ore in 1843, as the files of the old *Reporter* will show. This plant was then called Maria forge, and worked from fifty to one hundred hands. The blacksmiths declared the iron they made to be superior to anything heretofore used in point of ductility and durability. One thing I can say from personal experience — it was the most durable iron in horseshoes that I have before or since ever used. The excellence of this iron was partly due to the ore used, the brown hematite, the fineness of the charcoal, and the skill of the workmen employed; but mainly to the length of time during the hammering process."

The Riddle brothers were railroad contractors and civil engineers, originally from Hollidaysburg, Pennsylvania, where they had been engaged in early railroad construction. On their venture South they were accompanied by two iron makers, Silas and David Garrigus, descendants of colonial iron workers, and by George D. Wheeler, a civil engineer.

A minute description of Maria forge as operated by the Riddles has been written for this work by Walter D. Riddle, a nephew of the pioneer iron maker.

"Maria forge was located on the banks of Talladega Creek, and was operated by water power obtained from that stream. The dam was ten feet high; the water wheel that run the forge hammer was eight feet in diameter, with eight feet face for the paddles or buckets, as they were called in an overshot wheel, spaced about two feet apart. The flanges or end of the wheel were solid, made of planks pinned together with wooden pins. This was called a breast-wheel. The shaft was about twenty inches in diameter and octagon shaped. The water struck the wheel up about three feet from the bottom. The water opening was about six inches at the start (that is from the paddle) and came to a close at the bottom of the wheel, and was made with the same circle as the wheel. The shaft was about twenty-five feet long. On the end of the shaft there was a cast iron ring called the horns. There were eight horns, or lifters, that lifted the hammer. These horns were shod with hard wood — maple or hickory. The hammer handle was parallel with the shaft, so that when the horns came around they would lift the hammer. The handle of the hammer was about twelve feet long and twelve inches square, made of black gum, and above the hammer there was a strong spring, called the 'rabbit.' This would force the hammer down when thrown up, thereby causing a quicker stroke. The hammer struck this spring or 'rabbit' as hard as it did the anvil, therefore it took great resisting power to hold the 'rabbit' in place. To secure this, the 'rabbit' and hammer handle were fastened between two posts which were held steady by four beams as long as they could be hewn, and keyed together, and long enough to reach across the building, acting as a lever to hold the posts solid. The hammer was of cast iron, weighing about five hundred pounds. Its face was three by twelve inches and when in full operation made about eighty strokes per minute.

"The bellows were two cylinders about four feet in diameter, the pistons being driven from the bottom by a beam with an axle between the cylinders, called a walking beam. This beam was worked by a water wheel like the hammer wheel, though smaller, getting the motion with a crank.

"The ore was crushed by four stamps, then called 'stompers,'

operated by a still smaller wheel. These stompers were about ten feet high, made of wood six inches by six inches, working between wooden guides, and were lifted by wooden cogs on a wooden shaft. On this shaft was a wooden pulley driven by one on the shaft of the water wheel. The stamps or stompers were shod with iron. The ore was fed into the mortar by a boy, and a constant stream of water ran into the mortar, thus keeping it from choking. The mortar in which the ore was crushed had iron bars set edgewise in the bottom, about one half inch apart. As the ore was crushed sufficiently fine the water and ore passed between the bars. A box below the mortar caught the ore, letting the mud pass off with the water, and leaving the ore washed, ready for use.

"From this box the crushed ore was carried in a wheelbarrow to the fireplace or furnace, thrown on the fire and melted down. The fireplace was about four feet square, built of slate rock obtained from the hills near by, no fire brick or fire clay entering into its construction. In the bottom there was a place rounded out and about two feet deep to receive the melted iron. In front of this was an iron plate with holes in it, to let out the slag. The operators would open the top hole first, then the next, and so on until they drew off the slag down to the iron and then cooled down the fire. After the melted iron had cooled enough to hold together and form a mass they rounded it up with long bars, rolled it out on the floor and hammered it round with hand hammers. This round mass was then caught with a pair of large hooks, made something like tongs, then carried with a crane to the hammer, and it was hammered down to about six inches square and about three feet long. This was called 'shingling a loop.' When taken from the fire it was called a 'loop.' After the 'shingling' process, the mass of iron thus hammered was again heated and cut into pieces of the proper size for any bar that was desired to be made.

"After cutting the pieces were handled with tongs. If a wagon tire was to be drawn the operator had a strip of iron with a notch to gauge the width and thickness, and the hammer man drew about a foot of the bar by his gauge, the rest of it by his eye and it would be perfectly correct. As they were heating this bar in the fire to be drawn out other ore was thrown on the fire to make the next 'loop.' At Maria forge they made a grade of iron equal to the best Swedes iron, and all this grade of iron there made was stamped with a boar's head, the Riddle family crest.

"The capacity of Maria forge was about a ton of iron every twenty-four hours, the price in its early operation being about eight cents per pound. In operating the furnace the first blast was made by having a box with bottom open and lowered into still water, with a square column of water forced into the box. The water came straight down through the air about two feet.

The opening in top of box was the same size as water column. There was a space in the box above the still water, and the air going in with the water was condensed and so forced through a pipe leading to the top of the box and into the fireplace. After this the cyclinders heretofore described were used for getting the blast. These cyclinders, called bellows, forced the air into a receiver four feet square. The top and bottom of the receiver were of wood, the sides of leather. Weights were placed on top to give the air regular pressure. A cast iron pipe ran from the receiver to the fireplace or furnace and through and back just over the fire, thus heating the air forced through the pipes, and when expelled giving what was then called a hot blast. Maria forge had four fireplaces. Most of the pipes used in its operation were made by boring a hole through logs of wood, as iron piping was scarce and difficult to get in that day, and in that locality, as it was fully sixty miles to Wetumpka, the nearest shipping point. A few pieces of inch pipe, about four feet long and hand made, were used. I have one of these pipes in my possession now. When one of these early forges was in operation the strokes of the hammer could be heard at a distance of three miles. S. S. Riddle, George D. Wheeler, and Davis Garragus were the first people to successfully make iron in this county, the Eagle being started by parties that learned how to make iron while working with my father, who was the principal among the Riddle brothers in operating the iron works. Maria turned out more iron than all the others combined. The Eagle was soon washed away and G. M. Riddle and John Moore failed and sold to Mr. Curry. Trains of wagons were kept busy by my father, hauling iron to Wetumpka and Montgomery and also supplied the local demand. In 1851 or 1852 a man named Spang came here from Pennsylvania and started a foundry at Riddle's Mill (now Waldo), one-half mile from Maria forge, and made pots, skillets, stoves, plows, and other castings.

"The logs to make the lumber used in erecting the Eagle were hauled on a truck wagon, the wheels of which were discs sawed from a large black gum log. I wonder what the machinist of to-day would think of running an iron furnace or forge, without one foot of iron shafting, without a single iron pulley, or a pound of Babbitt metal, with all of the journals being run on wooden bearings."

The Eagle forge was located three miles from Maria forge. It was built by George D. Wheeler and Israel Sprayberry. Rob Roy forge was also situated on Talladega Creek, either in Section 35 or 36, Township 19, Range 6, and some two or three miles southeast of Eagle forge. It was erected by George M. Riddle and John Moore. George M. Riddle was a brother-in-law of S. S. Riddle. Neither the Eagle nor Rob Roy was as large as

the Maria. Rob Roy had only two fireplaces, but had a saw and grist mill in connection with the forge.

During the Civil War Major Walker Reynolds and David Garragus took some of the material left from Maria forge and started to build a forge on Fains Creek. Major Reynolds sold his interest to John T. Ragan, who had worked many years with the Riddle brothers. This forge was operated for some little time after the close of the Civil War.

Professor Tuomey's description of the pioneer operations in Talladega is as follows:

"In these forges there are four stamps of 50 pounds each. There are two furnaces at each forge, and in the ordinary years the Talladega Creek will drive the blast for nine months. It requires fourteen to fifteen hands to attend to a forge. The working force is divided thus:

One (sometimes two) hammerman.
Two firemen . . . . . Working at forge.
One hand to stamp and roast ore.
Four hands to chop wood.
Three teamsters.
Two colliers.

"The cost of putting up such works, exclusive of dwelling houses, roads, etc., is from $2,500 to $3,000. The charge of the furnace is usually 5 pounds of ore to 1 pound of iron. The charcoal used is 700 bushels to the ton (of 2,000 pounds.) of bar iron. The weight of the loop of iron produced varies from 100 to 135 pounds, and is made in three hours, so that four loops are the result of a full day's work. A loop of 125 pounds yielded 100 pounds of bar iron. This is worth $5.50 per 100 pounds, at the works. The pound of iron ought not to cost the manufacturers more than three cents.

"All the ore is now obtained from the Chinebee bed, at Seay's, 25 cents being paid for the privilege of hauling a load of 3,500 pounds of ore. For raising the ore and piling it at the bank, 25 cents are given, while the hauling amounts to one dollar per 1,000 pounds. The Chinebee bed has now been worked thirteen or fourteen years.

"Small, irregular pieces of iron are formed during the working of the loop, which are found troublesome. On being dissolved in sulphuric acid, they give a considerable amount of phosphorus and quartz, chemically combined. It is probable, therefore, that these are portions of the iron, rendered hard by such impurities."

The cost of 3,000 pounds of ore delivered to Riddles' bloomery, a distance of six miles, was $4.50. "To-day," writes Judge Miller,

"tangled vines, the lizard, and slimy moccasin creep over the crumbling remains of all of these monuments of Alabama's early industrial life."

The two following advertisements appeared in *The Alabama Reporter* of Talladega, June 12, 1845:

BUY AT HOME.

The Subscriber begs leave to inform the citizens of Talladega and the surrounding counties that he has purchased the IRON WORKS lately owned by JNO. M. MOORE, situated on Talladega Creek, six miles from Talladega and half a mile below LONG'S MILLS, on the Socapatoy Road, and will keep constantly on hand a general assortment of IRON, which he will sell at less than Wetumpka prices viz: 6¼ cts. and warrant to be equal to any in the United States. Mill Irons, &c. made to shortest notice.

He will also keep a constant supply of assorted Iron at the Store of Messrs. T. W. HUEY & CO., Talladega, and at the store of Messrs. CURRY & GROCE, Kelley's Springs. Orders addressed to the subscriber, at Talladega, or to T. W. Huey & Co., will be promptly attend[ed] to.

W. D. RIDDLE.

GIN MAKING
AND
REPAIRING.

The subscriber wishes to inform the citizens of Talladega and the adjoining counties that he has commenced the above business in the town of Talladega.

ALSO

Making Whippers and Flues, for cleaning Cotton.

ALSO

Wheat Thrashers,
suited to Water or Horse power.

Those Machines will be made on plans most in use in England and Scotland, which are different in some respects from any made in this country, and will thrash much faster.

N. B.—I would say to those who wish to have work done in this line of business that they would call at my Shop on Main street, next door to Coe's Black Smith shop.

JOHN W. MARTIN.

Talladega, May 1st, 1845.

Concerning the old blast furnace on Choccolocco Creek, Judge Miller says:

"In the early eighteen-fifties James L. and William Craig Orr, brothers and highly skilled mechanics, acquired a tract of land in sections 11, 12, 13, and 14, Township 17, Range 6, East, in Talladega County, and some two miles from the present town of Munford. Through this tract of land Choccolocco Creek, from three to five chains wide, wended its tortuous way over rocky shoals. A dam was erected on this creek by the Orr brothers, harnessing an exceptionally fine water power, which was utilized by them in driving the machinery for a large factory for the manufacture of cotton gins. This manufactory did a large and lucrative business, and cotton gins from its product supplied a large portion of North Alabama, Mississippi, Georgia, and Tennessee, being transported to these markets by wagon, as no railroad had then been built in Talladega County. About 1854 Samuel Hunter was taken into the firm and the business was conducted in the name of Orr & Hunter. In 1860 William Craig Orr died. His interest in the cotton gin factory was sold to the surviving partners, and the manufacture of gins continued until after the breaking out of the War of Secession in 1861. Cotton planting in the South then ceased, and the Orr & Hunter manufacturing plant ceased to operate. . . .

"In 1863, and after the fall of New Orleans, two bachelor brothers of large wealth, Jacob B. and Benjamin Knight, refugeed from Louisiana, bringing with them a large number of slaves. They came to Talladega County and, on March 11, 1863, for a consideration of $20,000, Orr & Hunter conveyed to Jacob B. Knight the more than eight hundred acres of land and all the tenements and appurtenances of their manufacturing plant. The Knight brothers at once converted the plant into a cotton factory for the spinning of yarn, and also erected a blast furnace, having a capacity of about four tons of pig iron per day, the power to operate which, together with the cotton factory, being supplied by the waters of the Choccolocco. A foundry was also put in operation, where pots, kettles, and many other castings were made. All the different branches of this manufacturing plant were kept in full and successful operation by the Knight brothers until April, 1865, when General Croxton's brigade, of Federal General Wilson's raiders, applied the torch to everything combustible, and wrought such utter destruction of the entire plant that only a few chimneys and a portion of the furnace stack marked the spot that had been the hive of these several industries for so many years. Upon the close of hostilities between the sections in 1865 the Knight brothers returned to Louisiana, the site of their plant passed into other hands, and only a part of their furnace stack remains, a silent and unrelieved sentinel, standing guard over the grounds where once stood the homes of many of Talladega's industrial workers. A few miles away, at the home of N. B. Linder, there is a large wash pot, which, after constant service for forty years, is still doing full duty, and bearing witness

to the excellent quality of hollow ware turned out from Knight Brothers' foundry."

The second furnace erected in Talladega County was known first as Salt Creek iron works, then as Alabama furnace, and was later called Jenifer. It was constructed during the Civil War.

There is a tradition to the effect that a tribe of Indians called the Ullabees, corrupted by the whites into Hillabees, occupied the mountainous district along Talladega Creek, extending into the present county of Clay, and that these Ullabees had iron arrow heads, and various rude implements made of iron when the first settlers penetrated the wilds and traded with the Ullabee clan of the Muscogee Indians. Although this is probably no more than tradition, it is interesting and has its place in Alabama folklore.

According to Judge Miller the territory east of the Coosa River and north of Coosa, Chambers, and Tallapoosa counties was not acquired from the Indians until the treaty made with them in 1832, and but few white settlers had gone into this territory until 1833, and even during that year these few were threatened with an Indian war, and some hurriedly left. This territory, including Benton (now Calhoun), part of Cherokee, Cleburne, Clay, Randolph, and Talladega counties, was occupied by the Creek and Cherokee Indians until the autumn of 1836, when they were forced by the State guard or militia, assisted by United States troops and marshals, into corrals or camps, and late in that year removed — most of them — to Indian Territory.

Among the many early settlers of Talladega who achieved prominence in Alabama history was a close relative of John Pierpont Morgan, Lewis E. Parsons, who served in 1865 as provisional governor of the State. Mr. Parsons, who was a grandson of Jonathan Edwards, was a native of New York State. He came South in 1840 and practiced law in Talladega. For more than forty years he was a citizen of Alabama and owned mineral lands here, but he never became identified with the iron making ventures of the South.

Iron making in Calhoun County was commenced a few years after Maria forge of Talladega went into operation.[1] Only one

[1] Data received from George B. Randolph of Anniston, Alabama, Jacob Stroup of Hot Springs, Arkansas, W. P. Lay of Gadsden, Alabama, John E. Ware, J. H. Weatherly of Birmingham, Alabama, and Thomas M. Owen, Director of Department of Archives and History.

plant existed here in the antebellum period, but that one is known by five names: Cane Creek iron works, Benton iron works, Moore and Goode furnace, Crowe's iron works, and the Old Polkville furnace.

The fact that it was this plant that furnished a portion of the iron used on the *Merrimac* in the Civil War, gives it a special distinction. Its establishment by Jacob Stroup, the builder of the first iron works of the Carolinas and of Georgia, and by Noah P. Goode in the early eighteen-forties has been chronicled in the chapter on Tuskaloosa. Mr. Stroup furnished the capital and worked with Goode in the construction and original operation of the plant. He sold out in 1842 and returned to Habersham County, Georgia. Dr. John M. Moore of Talladega, later went into partnership with Goode, furnishing the capital and the slave labor.

The Moore and Goode furnace was, according to Judge Randolph, located in the northwest quarter of Section 14, Township 15, south of Range 6, East, on Cane Creek, about six or seven from where the stream flows into the Coosa River. It was operated by water power and had at the start a limited capacity — not more than two or three tons.

"Much of the iron was converted into wrought iron by being beaten and drawn out by immense trip hammers operated by the water power," writes Judge Randolph. "Also much of it was made into wagon tires, molded into plow shares, pots, skillets, kettles, dog irons, and shovels, and during the Civil War they made large kettles used in the salt works in Clarke County, Alabama. Some of it was made into castings and shipped to the different Southern States, Georgia, South Carolina, and some went as far as the State of Texas.

"The iron was made into blooms, which were heated to a high state and drawn out between a large anvil and the trip hammers into wrought iron and put in the proper shape. In fact, this system was the forerunner of our present day rolling mill, evolutionized, as the old spinning wheel and loom to our modern looms.

"This old furnace stood on the creek at the south end of Chalybeate mountain and just below a fall in the creek from which was obtained the power. The trip hammers were operated by cogs attached to the water wheel shaft, and in making its revolution these cogs would trip the hammer and let it fall on the hot iron, which was being held by large iron tongs in the hands of the expert roller, who would continue to draw it out until brought to its desired shape. They must have been ponderous hammers,

as I have been told by old settlers that their pounding could be heard a distance of four or five miles of a still morning.

"The ore, limestone for fluxing, and sand and charcoal were found right at hand near the furnace. The iron seems to have been paid for by the pound, for its 'drawing,' hauling, and selling was all by the pound.

"O. M. Alexander of Anniston has in his possession the old furnace book. The first item as shown by these books is as follows: '1843—August 12: Thos. Carter, for making 230 pounds of iron. His total to August 31 was 3,562 pounds.'

"An entry on August 30, 1843, shows that Sam (negro) had made a total of 2,408 pounds. This was kept up daily, showing the furnace was continuously working.

"Beginning in the year 1845 are many items showing amounts, and to whom paid, for hauling pig iron and blooms to the creek and the river. This was Tallassahatchee Creek and the Coosa River. The yard where the boats were built was located on Tallassahatchee Creek, just below the mouth of Ohatchie Creek, and much of the product was loaded in the boats, and at proper tide of water was floated into the river and carried to Wetumpka, Montgomery, Selma, and Mobile.

"During the month of March, 1847, are items showing '38,080 pounds hauled to river, 4,480 off for McGhee, 33,600 sent to Alfred A. Janney.'

"Mr. Janney is still living in Montgomery, Alabama, and as he was furnishing iron in the construction of the State capitol, being built at that time, therefore Calhoun County has the distinction of furnishing the iron in the first capitol built in Montgomery. In the month of June, 1848, during our war with Mexico, are items showing blooms run out and sent to Mobile.

"The boating down the Coosa was extra hazardous, floating over the fall and rocks, going through the Weduska shoals, passing through the narrows and darting down the 'devil's staircase' and other rapids of the lower Coosa. The crew from the Coosa would deliver the boats at Wetumpka and foot it back to their homes. W. N. Coker, a citizen of Calhoun County, who was born and raised near the old furnace, says that when a boy he has seen these old boatmen footing it home from Wetumpka, where they had left their boat, making the distance, 90 miles, in two days, afoot. This was tall sprinting, but Mr. Coker is here to vouch for it. Many of the men who did this hauling, as shown by the old books, have left descendants who have become men of prominence in the professions and business of our country. Among those paid for hauling pig iron and blooms to the river and creek as far back as 1846 are P. Brothers, L. Coker, William C. Ritchie, the Englands, R. Ingram, I. Meharg, Louis Meharg, Lewis Downing, G. B. Douthit, and many others.

"The mouth of Tallassahatchee Creek is 136 miles north of Wetumpka, and from here the flatboats loaded with iron from

the Moore and Goode furnace were loaded for shipment below. There are more or less of those shoals composed of sandstone and chert until we arrive at Weduska Shoals, forty-seven miles above Wetumpka, where the river strikes the metamorphic formation composed of granite, semi-granite, schists, and gneiss from that point on to Wetumpka.

"Right here at Weduska Shoals was where the old boatman's trouble set in. These shoals are in the shape of a fan handle. They are over 3,000 feet wide at the widest part, and terminate at the handle of the fan to 390 feet. The shoals contain many large rocks and islands. The water is swift and strikes those obstacles with great force, throwing up spray and white caps with a great roar. It forms great eddies and whirlpools. Through this the old boatman would be taken in a waltz, and on through the narrows, after which the river widens out to about 2,400 feet, forming the great Waxahatchee Shoals. The shoals have reefs extending from bank to bank, being from one foot to three feet high, and on down through the 'Devil's Race,' shooting the chutes, over Butting Ram Shoals with its barren rocks, from three to four hundred feet high, steering clear of the immense whirlpools and 'suck,' and on to the dangerous Tuck-a-league Shoals and other dangerous rapids until he finally reaches his destination — Wetumpka.

"The post-office afterwards established at the old furnace was named Polkville, in honor of President James K. Polk. The old Democrats made a cannon to celebrate Polk's election, and grew so enthusiastic in firing the old gun that it burst. This old cannon was taken to Talladega and set up at the old Isbell corner.

"The furnace continued to run under different owners until destroyed by General Lovell H. Rousseau, of the Union army, July 14, 1864. Among the owners were Moore and Goode, Morris, Hicks and Loyd, Shepard and Moses, and lastly Daniel Crow.

"After the beginning of the Civil War the product of this furnace was largely consumed by the Confederate Government, some being sent to Selma and Rome, Georgia, where it was made into cannon and other munitions of war. Some was used in the construction of gunboats."

Speaking of the primitive mode of operation of this furnace, Captain Lay says:

"One of the peculiarities was the crude and unusual method of blowing the furnace. The blowing engine, or more properly the apparatus which supplied a blast to the crucible, was nothing more than a wooden box about twelve feet square and twenty feet high. The box was placed upright under a fall and the creek poured through an opening at the top. The outlet at the

bottom was so arranged and regulated that a certain amount of water remained in the bottom. The moving water created a current and a pressure of air which could not escape except through an opening which piped it to the furnace. This method was long in use, but later a practical blowing outfit was installed by the Morris family."

"Cane Creek got its name from the vast fields of cane brake formerly growing along its course. It leaps out of the blue hills, and just after flashing by the Weatherly plantation, it turns off quite suddenly, 'just like it got mad over something,' said Squire Weatherly, 'and runs away around.' Within the favored ground where it circles in a wide detour, making an odd-shaped loop, the old iron works were built. On this pleasant, green peninsula, twenty-five acres in all, there were grouped, besides the iron works, all the houses and little farms, owners' homes, workers' houses, and quarters for fifty slaves. It was the centre of business activity for that whole region for near twenty years. 'Oh, it was lively then!' exclaimed Squire Weatherly. 'My father, James A. Weatherly, settled on Cane Creek in 1836, about twelve miles west of where Anniston now is. I was born in that year. My father owned a small farm and saw mill that stood not one hundred yards from the furnace. I remember when it was built. It was not merely a furnace for the purpose of making pig iron, for connected with it was a foundry, at which every description of machinery was manufactured and all kinds of hollow ware. A large amount of the pig iron was used in the manufacture of wrought iron which was puddled and drawn out under huge hammers. The old forge hammer weighed six hundred pounds and we could hear it boom, boom, for miles beyond Cane Creek. I remember we had a man of almost giant stature who, they said, once lifted that big hammer off its anvil.'

"With the coming of these iron works came the usual commissary store, a post-office, and biweekly horse mail, a general merchandise store, a doctor and his shop, a blacksmith shop, a wagon shop, and a small machine shop. As all the heavy common labor was supplied by Mr. Moore, only a few farmers, skilled mechanics, carpenters, machinists, foundrymen, etc., were needed. But these added ten or twelve white families. The ore (brown) was hauled about two miles, and all the pine and some oak for miles was cut away for charcoal. This timber has been replaced by a real forest of large oaks. The sound and bustle around this village quickened the pulse of the country folk for miles around.

"All the machinery, furnace, forge hammer, machine shop, grist and saw mill, was run by water. The dam was built half a mile northeast of the furnace, and from that point the creek made a big loop and came back, north, within a few steps of the cast-shed. The wood works were burned in Rousseau's raid, but

the beautiful creek, with its peninsula, is there yet, a lovely situation, and so is the fine bed of ore. But the life of those prosperous days has given way to the ravages of time, and dead silence has taken the place of human industry."

This old ore property is owned to-day by the Morris Mining Company and by the Birmingham firm of Shook and Fletcher.

An advertisement referring to the old company appeared in *The Alabama Reporter* of June 12, 1845, as follows:

IRON CASTINGS &c.

The undersigned have on hand a large supply of first rate Iron, and will shortly be supplied with every description of Castings and Hollow wares, at their Iron manufactory on Cane Creek in Benton County, all which they will warrant to be of the very best quality, and will sell them cheaper than they can be procured any where else north of Mobile. They will keep supplies at the various towns and villages in the surrounding country — all farmers and blacksmiths who need supplies will find it greatly to their interest to buy of

NOAH GOODE, & CO.

N. B. They will shortly be prepared to fill orders for Castings — address the firm at Alexandria, Benton County, Alabama.

N. G. & Co.

The public are respectfully informed, that a supply of Iron from the above mentioned Iron-Works, is kept constantly on hand by

CUNNINGHAM & DIXON.

December 20, 1843.

William P. Chilton has disposed of his interest in the above firm, and has withdrawn by consent. The business is carried on by Noah Goode & John M. Moore.

Tuomey observed in 1849 that the ore used by these iron works had been used for years in the bloomeries of the Little Cahaba. The daily output of this furnace is stated in his report to have been six thousand pounds of iron; two thousand pounds of which was put into hollow ware and machinery castings, two thousand pounds into bar iron, and two thousand pounds into pigs. Six hundred bushels of charcoal was used every twenty-four hours. Stone coal beds thirteen miles off were also worked. They were then starting a rolling mill and looking to turn out all kinds of machinery and fine castings for cotton mills. "An

extension of the works, introduction of the hot blast, and various other improvements are contemplated, which, when accomplished, will place this among the most complete establishments in the South."

E. G. Morris, when a boy, constructed some of the machinery of this plant. Its site now belongs to his sons, who are operating a foundry at Morrisville, near Anniston.

Judge Randolph relates an incident of these times:

"Slaves were worked in mining ore for the furnace, and each one had set tasks to perform. One Saturday one of those negro miners, by the name of Vann, applied for a pass, running from that day noon until the following Monday morning, to visit his wife, who was a slave, belonging to Captain Floyd Bush, living some six miles distant. Monday morning Vann did not report for duty. A messenger was sent over to Captain Bush's. As Vann was a faithful servant it was thought he might have been taken sick. The messenger was told that no one had seen Vann. It was then naturally suspected that the negro had run away. Runners were started out in every direction, but nothing could be heard of the old slave. In a few days another man was sent to the mine worked by Vann. It seemed that the old slave had bored a tunnel under the hill to get the ore to save the stripping of the over burden, and a cave-in had taken place, thus burying him alive. The tunnel was filled with loose earth and rock fallen from the roof, and it was many days before the body of poor old Vann was found."

At that time, death in a mine in Alabama was an utterly unlooked-for fate. This tragedy of the old slave made a profound impression all over the country. How many hundreds since this early time, both white and black, have been brought up out of the mine's pitiless jaws, crushed in harness, God alone counts! If the mineral wealth of Alabama has proven to be the glory of our State, it has also been the source of countless tragedies.

Operations in Cherokee County will be approached during the war period. Records of its one important antebellum plant, that of Round Mountain, have already been detailed. On the northern edge of Lauderdale County a group of mills and furnace and foundry were put up in 1850, by Samuel Vanlier. The iron was hauled by wagon to Florence and shipped by river to various points.

Concerning operations in northwest Alabama in the county of Lamar, Walter Nesmith of Vernon, Alabama, writes:

"I find that in 1857 there was a forge established about one and one-half miles from what is known as the Hale and Murdock furnace. The ore was hauled by wagon, and there made into iron. In 1859 the furnace was built about two and a half miles west of Vernon by the Hale and Murdock Iron Company, and continued in business from the time it was inaugurated until about 1868, when it went into bankruptcy. From the time it went into operation pig iron and all kinds of vessels, plows, and horseshoes were made there. These products were hauled to Columbus, Mississippi, a distance of about twenty-four miles. The ore from the Hale and Murdock Furnace hill, as it is still called, is known as the brown hematite. Its quality, although experts differ as to its quantity, seems to rate among the best in the State. The plows which were manufactured at this old furnace are said to have been much better than those we get now. This concern worked about one hundred and fifty hands, day and night, from the time it was established to the time it went into bankruptcy, and it consumed only a very small part of the hill and is said to have done a very prosperous business." Items received from Mr. Hale's sons, M. A. Hale and Dayton Hale of Atlanta, Georgia, are here given: "Harrison Hale and Abraham Murdock, under the firm name of Hale and Murdock of Columbus, Mississippi, began making blooms and plow molds in 1858 in Fayette, afterwards Sanford, now Lamar County, Alabama. The forge was located on Wilsons Creek, a short distance from the ore beds and from the site of the furnace afterwards built. An old-fashioned undershot wheel was used for developing the power to operate a trip hammer. The iron was hauled to Columbus, Mississippi, and sold to farmers and planters. Its superior quality made it eagerly sought for and it was sold at the high price of imported Swedes iron. The furnace was run for four years after the war closed, but the long distance from the railroad, and the necessity for hauling with wagons all the supplies used and all the iron made caused large losses. And because of the losses and the competition with other more favorably located, the enterprise was abandoned. There has never been another furnace built on the site and the ore beds have never been worked since."

Both Hale and Murdock were New England men, it seems, and like Daniel Pratt, stout advocates for diversified industries in the South. They were engaged not only in iron making, but also in railroad operations, in the cotton business, and in mercantile business. They were the first men to build and operate cotton mills in the State of Mississippi.

Abraham Murdock was the son of the scholar and theologian, James Murdock of Connecticut. Concerning him Mr. Nesmith writes:

"Mr. Murdock was a graduate of Yale, and besides being a man, far-seeing and practical, he had rare scholarly attainments and was a speaker of fluency, effectiveness, and classical diction. He took great interest in public affairs and represented Lowndes County, of which Columbus is the county seat, in the legislature. He removed from Columbus, Mississippi, to Mobile, and was for some time president of the Mobile and Ohio Railroad, succeeding Judge Milton Brown in that office. Mr. Murdock died shortly after the war in Mexico, where he was engaged in opening up silver mines."

M. A. Hale of Atlanta contributes the following biographical sketch of his father:

"Harrison Hale was born in Winchendon, Massachusetts, in 1807. He was a descendant of Thomas Hale, an emigrant from England, one of the early settlers of Newburyport, Massachusetts. Harrison Hale came South in 1835 and formed a partnership with Abraham Murdock in merchandising and manufacturing. This partnership continued for thirty years. The firm had factories, mills, and tanneries located at Bankston, Wesson, and at Columbus. During the war they manufactured hats, brogan shoes, and saddles and blankets for the Confederate army, as well as shot and shell. Although opposed to secession and exempt by reason of his occupation, Harrison Hale volunteered and served as captain of a Mississippi company raised in 1864."

Mr. Hale was a relative of United States Senator Hale.

Having now surveyed the operations of the pioneer workmen in the counties of Franklin, Jefferson, Blount, Walker, Tuskaloosa, Bibb, Shelby, Talladega, Calhoun, Cherokee, Lauderdale, and Lamar, the sum total of iron works existing before 1861 is found to have been twenty-seven. Of these there were nine primitive furnace plants, seventeen forges, and one rolling mill. In Jefferson County, which is to-day the center of activity of the mineral region, there was neither forge, furnace, nor foundry of any description. Up to the year 1862 only a few far-scattered blacksmith shops existed here. A smithy is frequently designated as "iron works" by local chroniclers. Many of the so-called early forges were in reality not much more than large-sized blacksmith shops. The solitary little log smithy of Old Jonesboro is spoken of in Miss Duffee's Chronicles, prior to the war, as "the leading iron working establishment of Jones Valley." In this narrative discrimination has been made as far as

possible. The smithy is always the first step; it is always an auxiliary, and, therefore, has its own place and degree of importance in a history of iron making.

Concerning the early iron works of Alabama in general, John E. Ware writes as follows:

"So far as we know, all of these forges worked brown hematite ores, used charcoal as a fuel, and water for blast power, and while they earned good money for the sturdy owners, and quite plentifully supplied our early settlers and farmers with good, strong iron for their horseshoes, wagon tires, and plow molds, it appears now that the widest and most lasting good accomplished by them — their real, substantial mission, in fact — was to serve as a forerunner in a vast spread of wholly undeveloped mineral resources, calling public attention to outcroppings here and there, and giving to the consumer an opening idea as to what ores we had, and make known to the world the fact that they could be easily and cheaply reduced to the highest form of steel in every line of manufacture. And in what better form and condition — more pleasing, more convincing as to quality and as to utility — could this great undeveloped mineral resource of ours have been indexed and presented, than in the rugged shape of the beautifully blue-tinted bloom of the old style Catalan forge product, showing its strength and malleability against all competition, and ready at once to be hammered out into every useful shape by the waiting blacksmith?"

It has been said that the burdening of these old-time blast furnaces was based somewhat on Mark Twain's recipe for Johnny-cake: "A lot of ore, a lot of fuel, and about a quarter of a lot of flux."

A statement of pig iron prices from 1849 to 1861, in the handwriting of Horace Ware, is as follows:

Date	Price	To whom sold
1849	$30.00	Gindrat & Co., Montgomery.
1850	30.00	Jany & Co., "
1851	30.00	Gindrat & Co., "
1852	30.00	" "
1853	30.00	Daniel Pratt, Washington (Alabama).
1854	38.00	" " "
1855	36.00	" " "
1856	36.00	" " "
1857	34.00	" " "
1858	32.00	" " Selma.
1859	30.00	" " "
1860	30.00	Campbell & Co., Selma.
1861	30.00	" " " 2000 lb. at Columbiana depot
Boating	$6.00 per 2000 lb. to Montgomery, Washington and Prattville	
	6.72 " 2240 " hauling men $1.00 to $1.50	

An event of great import in State history, as well as in these chronicles, was the appointment in the year 1848, of the first State geologist, Michael Tuomey. The following joint resolution passed by the General Assembly of Alabama is recorded:

"Whereas, Michael Tuomey, professor of mineralogy, geology, and agricultural chemistry in the University of Alabama, is required by an ordinance of the Board of Trustees of the University to devote a portion of his time and labor to making geological explorations, and examining into the natural resources of the State; and,

"Whereas, it would be both interesting and useful to the General Assembly, and to the people, to examine the reports which he may make from time to time;

"Therefore, be it resolved by the Senate and the House of Representatives of Alabama in General Assembly convened, that Michael Tuomey, professor of geology, etc., in the University of Alabama, be and he is hereby appointed State geologist.

"Be it further enacted, that said State geologist be, and is hereby required to lay before the General Assembly of the State, at its biennial sessions, and as often as from time to time may be thought expedient, a full report of his geological surveys and explorations and his examination into the mineral and other natural resources of the State.

JOHN W. WINSTON, Speaker of the House of Representatives.
L. P. WALKER, President of the Senate.

Approved January 4, 1848. R. CHAPMAN, Governor."

As may be observed, no mention of appropriation or any remuneration whatsoever, for the geologist's services or expenses in office, or in the field, is made. None was accorded by the State for the ensuing six years. All funds were supplied by the self-sacrificing zeal and the lean pocketbook of the University of Alabama, whose officers alone appreciated the magnitude, the necessity, and the value of such a work to the country. This service has never yet received due recognition from the State, for the University of Alabama was thus godmother to the first efforts to explore scientifically the mineral region of Alabama. Out of its own treasury came the cash and out of its own heart the flame of encouragement to the early toilers. The State has reaped the benefits and a curtain has long been dropped over the action of the University and the work of Professor Tuomey.

Michael Tuomey was born on St. Michael's Day, 1805, in the city of Cork, Ireland. As a child he spent the greater portion of

his time at his grandmother's home in the country. Although he attended school in Cork for a short time, it was chiefly at home under direction of his mother and grandmother that he studied. Outdoors formed the main part of his curriculum. His mother had a singularly vivid and sensitive perception of the wood life and the beauties of the hills, while his grandmother was a profound student of botany. It seems that from these two gentlewomen the boy got his first hunger of the wilds and the feeding. His father, Thomas Tuomey, was a man of considerable mechanical skill. At seventeen, however, the boy was thrown on his own resources with only his rather curious and unique training for a stepping stone.

He took the first opening — a school in Yorkshire, England, where he taught for a space. Here track is lost of him for several years, the only thing being known that in the late eighteen-twenties he took passage for America. He located in Philadelphia and, always hankering for country life, managed to get into farming. But the Pennsylvania farming experiment did not pay, it seemed, and Michael Tuomey became a wanderer. He made his way to the eastern shore of Virginia, on foot chiefly, and he must have seen hard times. He took up a country school down there, and later became private tutor in the family of John H. Dennis, Esq., of Maryland. Here, in 1837, he met Miss Sarah E. Handy, whom he married several years later. Before his marriage he went up to Troy, New York, entered the Van Rensselaer Polytechnic Institute and was graduated from that school. Soon afterward he was appointed engineer in charge of the construction of a railroad in North Carolina. Luck did not seem to be with him, however, for the works shut down and he took to teaching school again, this time at a seminary in Loudon County, Virginia. About a year and a half later, with the assistance of his wife, he established a school of his own in Petersburg, Virginia.

He was gradually coming to his own. His school became headquarters for scientific men and scholars, and Professor Tuomey had there the largest and best collections in geology, mineralogy and paleontology in the State of Virginia. He carried on an active correspondence with the foremost geologists and scientists in this country and abroad, among them being Professor Bache, superintendent of the Coast Survey, Dana of Yale, Dr. Gibbs of Charleston, and the great Agassiz of Harvard.

On each of Sir Charles Lyell's visits to America he was Tuomey's guest in Petersburg.

Professor Tuomey made mineral discoveries of considerable value to Virginia, and being recommended to Governor Hammond of South Carolina by his scientific friend, Edmund Ruffin, Tuomey was appointed State geologist of South Carolina in the year 1844. In addition to two official reports on the geology of South Carolina, Tuomey completed, with Professor Holmes of Charleston, a work on the fossils of that State. Three years after taking up the work there, he received the appointment to the University of Alabama. By 1847, on account of the statements made by such scientists as Sir Charles Lyell and because of the floating reports of the untold mineral wealth of Alabama, this particular State must have had a peculiar interest to such an investigator and active workman as Tuomey. Certain it is that he came here keen. He no sooner began his professorship than he also entered upon a systematic examination of the geology of Alabama.

Not until 1854 was any appropriation for the geological work granted by the Alabama legislature. When the appropriation was made Professor Tuomey resigned from the University that he might give his time untrammeled to the State, lecturing only at intervals. He pushed out in all directions. The first general survey of Alabama was made at record-breaking speed. In two years' time the funds were exhausted and the geologist again took up his professorship at the University, carrying on at the same time the herculean task of preparing his exhaustive reports and finishing up the clerical end of the work. His observations, maps, records, and discoveries were in later years found to be so precise, exact, and accurate, so nearly perfect, in fact, that they are considered marvelous and the man himself has been called a genius by his fellows. Doubtless the secret of his speed and accuracy was his thorough, natural equipment. Such an observer as Michael Tuomey has seldom been known, and his memory was extraordinary. His reports are still consulted, even after the long lapse of the years. Alabama is not the only Southern State, however, with a debt of gratitude to Professor Tuomey, for Virginia and South Carolina are debtors likewise. He died in harness on the 30th of March, 1857, in his fifty-second year, his work just half complete. To the worth of his finished work those now in the field can testify. Down in Tuskaloosa to-day,

in what is known as the New Cemetery, there is the burial place of that good workman. A white marble cross, simply inscribed, stands at the grave's head.

"I can see Tuomey now," John T. Milner wrote in 1886, "as hammer in hand, he travels over our rough mountains, along our rugged streams, his soul full of the future of Alabama! His reports are the first guide books of the mineral regions of our State. Simple, earnest old man! Fate hurried him prematurely away only a few short years before the veil was lifted from the hidden treasures he alone knew lay buried in the bosom of his adopted State." [1]

Steps for mining coal and iron on a somewhat more systematic and extensive scale were taken up in several of the counties immediately after Tuomey's report. Southern capitalists were induced for the first time to invest their funds in coal and iron companies. Tuomey's report set the Governor and the legislature to thinking that Alabama had possibly another industrial future besides growing cotton.

[1] Address to the Georgia Society.

CHAPTER VIII

EARLY RAILROAD ENTERPRISES

Beginning of the South and North Railroad. Conditions in Alabama. Total railroad mileage of State in 1852, one hundred and sixty-five miles. Causes for lack of enterprise. "Macadamized roads less liable to accidents." Advent of Frank Gilmer. Conception of railroad across Red Mountain. Assistance rendered by Governor Moore. Sketch of Luke Pryor. Colonel Sloss' early years. Appropriation granted for reconnaissance. Appointment of John T. Milner as chief engineer. Young Milner's thirty-mile ride. Interesting points of his career. The great chance of his life. First view of Jones Valley. Synopsis of Milner's report. How the legislature received it. "The mineral region is so poor even a buzzard would starve to death." George S. Houston lends helping hand. "I was a gone up man," says Milner. The sensation of the day.

AN act of far-reaching influence upon the mineral region, and coming several years after the appointment of the State geologist, was the granting of the charter for the Alabama Central Railroad, or, as it was later termed, "The Old South and North," now a part of the Louisville and Nashville Railroad system. The act, passed by the legislature February 17, 1854, is accounted the most notable event of Governor Winston's administration. The fact of the matter is, however, that the business was put through, not by aid of Winston, but rather in spite of him. Samuel G. Jones, Charles Pollard, Frank Gilmer, George S. Houston, J. W. Lapsley, Luke Pryor, James W. Sloss, and a few men of their kidney were fighting for the cause of railroads in Alabama.

The northern and southern portions of the State, without a railroad, were two separate and distinct countries. Political, social, industrial, and economic conditions had become gradually tangled into a Gordian knot. The one solution now plainly before the people was a railroad; veritably, at that time, a feat Alexandrian. Various spasmodic efforts to get a railroad started through the mineral region had been made, since 1836: barbecues had been held, memorials adopted, orations pronounced. The while the knot became more tangled.

In the year 1852 the total railroad mileage of Alabama was one hundred and sixty-five miles. Memphis and Charleston had forty-four miles; Montgomery and West Point eighty-eight; Mobile and Ohio thirty-three. There were other railroads, it is true, but as yet on paper. They were "running hither and thither," remarks De Bows, "delighting the imagination with their laudable intentions and liberal extent!" Tuomey's report, however, aroused general interest in railroad construction. He succeeded, at length, in impressing the legislature with his own belief that the mountain countries abounded in mineral wealth.

Three railroads that would partially penetrate this region were actually under way: the Selma, Rome, and Dalton, now a portion of the Southern system; the Northeast and Southwest, later the Alabama and Chattanooga, now part of the Alabama Great Southern, and the Alabama Central for which charter was now granted. The increase in total mileage from one hundred and sixty-five miles in 1852 to eight hundred miles in 1860, is indicative of the enthusiasm for railroads born in this decade. Were the facts relative to the railroad history of Alabama of this period presented in detail it would require several volumes. The indifference on the part of the public and the State itself was practically suicidal. Up to the outbreak of the Civil War, indeed, the railroad system here was barely opened, while in other southern States it was far advanced in comparison. Alabama's railroads were small detached lines supported by individual subscriptions. They were consequently always trembling on the verge of collapse and utter extinction. In the year 1840 the people of Alabama voted for macadamized roads instead of railroads, "as being less liable to accidents." De Bows says in his *Commercial Review of the South,* "God may have given you coal and iron sufficient to work the spindles and navies of the world, but they will sleep in your everlasting hills until the trumpet of Gabriel shall sound unless you can do something better than build turnpikes." The members of the Internal Improvement Commission of 1840 reported to the legislature that not even a macadamized road could be built, "sandstone not being suitable thereto and limerock is not to be had!"[1] Indeed, one might gather from Garrett, De Bows, and Milner one perfect incident after another. But the main concern of this history is the old South and North Railroad. No sooner was its charter granted

[1] William Garrett.

than it was pigeonholed. This little difficulty did not, however, discourage Frank Gilmer, or the other railroad promoters. Colonel Gilmer was then by profession a cotton man, with headquarters at Montgomery. He was, in fact, one of the biggest planters and merchants of the Black Belt. But he knew that there was a hill country, for he had come into Alabama through it when he was a youngster and he had never forgotten it. He had come down from Tennessee on horseback at the very time David Hubbard was putting through the Decatur and Tuscumbia Railroad, which was also the year that James R. Powell and Josiah Morris entered the State. Although reared in Kentucky and Tennessee, Gilmer was a Georgia boy, born in Oglethorpe County in 1812. He was barely twenty-one years old when he set out for Montgomery to make his fortunes. When he came near to the big hill by Elyton in Jefferson County his attention was drawn to the curious stones sometimes crushed by his horse's hoofs. They were dark red, and there was that same red dust noticeable for some distance. The heavy wheels of the stage coaches, the shoes of the coach horses, farm wagons, and the sheep and cattle droves had powdered down the stony surface of the Montevallo road into a strange monotone of red. Frank Gilmer loaded his pockets and saddle bags with the curious "rocks." Some one in Montgomery told him that every rock he had in his pocket was solid iron ore and that he had come over a mountain of iron, named Red Mountain.

To Frank Gilmer the news seemed miraculous. He put his stones of mystery away and said no more. First he had his living to make. He began where he had left off in Tennessee, at teaching school. He saved enough, at length, to make a crude start in the mercantile business, and within ten years was on the road to financial success, and by 1850, accounted a rich man. But he never forgot Red Mountain; he never forgot that horseback ride through a country man-high in iron ore. "The dream of his life became a railroad from Montgomery to Nashville through the mineral regions of the State. There were other dreamers, it is true, on this subject, after the publication of Professor Tuomey's geological report in 1849. But theirs were night dreams and passed away as the sun arose. Not so with Frank Gilmer. The thought never left him. It followed him to his counting room, it followed him to his bed, it followed him in his church, it followed him everywhere. His thoughts became

words, and his words became acts, and the result was the South and North Railroad. . . . Frank Gilmer deserves the gratitude of every man, every woman, every citizen, and every taxpayer of Alabama. He inaugurated and built the South and North Railroad. He had lieutenants, it is true, or rather corporals, so to speak, for none of us ranked higher in comparison to him than corporal to general. He was in the material and financial world what Andrew Jackson was as a warrior, a man of the same mold and stamp." [1]

It can thus be readily seen that the mere act of pigeonholing the charter for his railroad could not snuff out Frank Gilmer's purpose. With the incoming of Andrew D. Moore as governor of Alabama there came hope of fishing out that charter and perhaps of getting State aid. Governor Moore was one of the few contemporaries of Michael Tuomey who realized the significance of the words "mineral wealth." Governor Moore had been a teacher and lawyer, a member of the State legislature, and judge of the circuit court. A bill providing for the construction of the Nashville and Decatur Railroad, which had been vetoed by Governor Winston, had been carried over Winston's head by Luke Pryor. James W. Sloss was president of this North Alabama road, which was eventually merged into the Louisville and Nashville system. Its history has as many windings as Gilmer's road. Its clan of fighting men joined forces with Frank Gilmer and Major Belser. The Mountain Contracting Company was organized to start construction work between Decatur and Calera.

Luke Pryor led affairs in his district. Judge Robert Brickell had been Pryor's first law partner. Now James W. Sloss was his side partner in railroad and commercial ventures. As noted in chapter two, Pryor's father and Sloss's father, after serving in the War of 1812, both settled in north Alabama, one in Madison County, and the other in Limestone. Luke Pryor was sent to the State legislature from Limestone early in the eighteen-fifties, along with Major T. H. Hobbs, to get a charter for the Nashville and Decatur Railroad. Years later, when the term of George S. Houston was closed by death, after his fine record of public service, Luke Pryor was appointed as his "only legitimate successor" in the United States senate.

[1] John T. Milner: Address before the Georgia Society, 1889, loaned by J. W. DuBose.

As for James Withers Sloss, or "Colonel" Sloss as he is always called, he was born on his father's farm in Limestone County, the year after Alabama was admitted to the Union. His first job was keeping books for a butcher near Florence, and he began it when he was no more than fifteen years old. He had to foot it a good many miles every day over rough roads to and from the shop, for seven successive years. He read and studied in between times as well as he could. He was gifted with application and a quick, bright sense. He came to like Shakespeare, and being true Irish, he liked Charles Lever and used to quote "Harry Lorrequer" and "Charles O'Malley" to the end of his days. One characteristic of Colonel Sloss was that he always knew his own mind. In his sixteenth year he decided to marry a girl he liked right well, Miss Mary Biggar, and on his twenty-second birthday, the marriage took place. The young man bought a small country store out of his seven years' savings and started shop in Athens, Alabama. He had a good eye to business, "though he was not much on a risk," and invested only where he knew for a fact the ground under foot was solid. He made few mistakes in his land speculations and business deals, and by the late eighteen-fifties he was called colonel, and had not only extended his mercantile interests throughout the entire northern section of the State, but he owned several fair-sized plantations, had a voice in county and State politics, and was taking up the fight for railroads with vigor, and that good Irish tongue of his to boot.

An appropriation for a reconnaissance for a railroad route through the mineral region was at length gained through the concerted and strenuous action of the group of railroad men interested.

The act on record reads as follows:

"And whereas, the legislature of Alabama did, on the fourth day of February, 1850, designate and select for the connection of the navigable waters of the bay of Mobile with the Tennessee River, the Alabama and Tennessee Rivers Railroad and the Tennessee and Coosa Railroad, and did appropriate for the purposes of carrying out said act of congress, all of one half of the said two per cent fund on hand and accruing up to that date, and to the extent of said appropriation took the same in stock of said company. . . .

"Section 6. And be it further enacted, that nothing contained in this act shall be so construed as in any wise to interfere with

any existing appropriation made by this, or any subsequent legislature, from the said two per cent fund accruing or coming into the treasury after the first day of December, 1857.

"Section 7. Be it further enacted, that the sum of $10,000 be, and the same is hereby appropriated, out of the three per cent fund now in the treasury, to be expended and applied, under the direction of the governor, in making a reconnaissance for a route for a railroad from the Tennessee River to some point on the Alabama and Tennessee Rivers Railroad, and to make a survey of the most practicable route to connect the Tennessee River with the navigable waters of the Mobile Bay, with reference to the development of the mineral region of the State, which said reconnaissance and survey must be made in the year 1858, report thereof to be made to the governor, which report shall contain a full statement of the length of the route, grades, cost per mile, together with all the particulars that are usually observed in surveys of this description. Approved, February 8, 1858."

As will be seen by this act the State had already been committed to another route. It had appropriated hundreds of thousands of dollars of the two and three per cent fund to the construction of the line from Selma to the Tennessee River via Gadsden, as complying with the laws of the United States, making the donation. The survey proposed under the seventh section of the act above quoted was a menace to the State's former committal, and war was at once declared on the new departure by one half of the political strength of the State. However, there were ten thousand dollars in hand for reconnaissance work and preliminary survey, and the next step was to find the man.

A young engineer, by the name of John Turner Milner was recommended to Governor Moore. Mr. Milner had not then been in the State more than a few years, and was scarcely known outside of railroad circles. He was engaged on a survey some twenty-five or thirty miles below Montgomery, when word of his appointment reached him. The thing was news to him, and his son, Henry Willis Milner, says, "He had pulled no wires to get it. In those days folk did not know anything about pulling wires and they would've scorned to do it, if they did know!" The man back of the appointment was probably Samuel G. Jones.

Minus coat, collar, and clad simply in his rough working rig, young Milner did not stop for so much as a shave, but he leaped on his mare and gave her the rein. Into Montgomery town she galloped — the thirty-mile ride — and straight up Dexter

Avenue to the front door of the capitol. Engineer Milner, plastered with mud, his leggings split, and his trousers torn, marched in to see the governor of Alabama. Moore stood up and put his hand on young Milner's shoulder. "Is this the man I have appointed chief engineer of our great State railroad?" he queried, and he looked him up and he looked him down. "Well," — the governor paused and there was a twinkle in his eye, — "it looks to me, Mr. Milner, as if the first thing we'd better do is get you some new breeches," he said.[1]

Young Milner, like Frank Gilmer, was a Georgian, born and bred. His father Willis T. Milner, Sr., was one of the frontier settlers of Pike County, and was engaged in various interests, — farming, saw-milling, mining, — and latterly he became a railroad contractor in both Georgia and Alabama. A Captain John Milner of the Continental Army was an ancestor, and the family of Scotch and English stock had settled in Virginia in the eighteenth century. John T., born September 29, 1826, at Milner Place, Pike County, was the oldest son. His first tutor was a New England teacher, his second, a French *émigré* of Charleston. The Milner family moved to Lumpkin County in 1837 where Willis Milner engaged in gold mining on a small scale.

John T. Milner had a little negro of his own named Steve, who followed him about like a shadow. They worked together and played together and in the holidays they started gold mining together. It was on the Pigeon Roost gold vein where John T. Milner and Steve got their first lessons in mining. They rolled wheelbarrows at the drift during the summers of four years. There was one particular section of ground near the mouth of Pigeon Creek, which looked fairly promising. "If John T. should ever strike gold there," his father said, "he can go to college." The boy then set to work to strike gold. With Steve and three other of the Milner slaves he worked for two months or more, digging through a ninety-foot alluvial deposit, and at length laid bare "the pay streak."

The very next morning John T. rode down to Dahlonega, got two new suits of clothes, and made arrangements to enter college. He made a specialty of law and engineering. Conscientious, plodding, savagely ambitious, he found his application at length over-riding his strength, and his health gave way, just before his senior year. George Hazlehurst, the engineer in charge of the

[1] Henry W. Milner of Birmingham, Alabama, son of John T. Milner.

Macon and Western Railroad, under the presidency of General Daniel Griffin, got Milner off into the woods and started him at the first rung of the ladder. Milner progressed through the various grades, becoming axman, rodman, topographer, levelman, transit man, and locating engineer. There was scarcely a boy in the South at that period with any technical training to speak of, and Milner's three years at college grind went a long way to boosting him up, when it came to the practical end. Within two years he was appointed assistant engineer of the old Muscogee Railroad, now a part of the Columbus and Macon Railroad. Then came the call to a far-off place! Lights of adventure beckoned to him and he followed. He joined the celebrated Georgia Company, one of the pioneer cross-the-continent groups of the great stream of 1849, and started for California. He became the city surveyor of San José, — but the events of his several years' life in California make up a book in itself. It is enough here to say that Milner returned to Georgia early in the eighteen-fifties, pretty well worn out. His father had by this time moved into Alabama, where he had taken a contract for grading on the Montgomery and West Point Railroad, the railroad chartered immediately after the Decatur and Tuskaloosa.

Young Milner joined him and shortly became first assistant engineer of the Alabama and Florida Railroad Company, and had charge of the location of that and various other lines. From that time, 1855, right on to 1858, he was engaged in engineering work throughout east Alabama, where the first pronounced railroad activity of the State made itself felt. The two or three big railroad men then in Alabama came to regard him with marked interest. When he got the appointment of chief engineer of the much-talked-of road, through the mineral region, his first great chance in life had come.

On March 27, 1858, precisely four years after the South and North Railroad had been chartered, the company was organized and reconnaissance work was begun. Milner started then to do that which unlocked the greatest mineral wealth contained in any connected area in the world. As chief engineer he was ordered to make the survey and report the cost of the projected road, the character of the country to be traversed, the value of the minerals to be reached, and give general recommendations concerning the public policy of the enterprise and the capacity of the country to support a railroad.

Milner collected his corps and entered upon his duties. "His estimates of the quantities of coal and iron that would eventually pass over the road," writes Baylis Grace, in the Jefferson County Record, "were prophetic and more than realized." Twenty-seven years later, Milner himself said: "When I look back and see the magnitude of the interests placed in my hands, I often wonder at the accidents that carried me through. I had no commissioners or advisers to aid me or advise me in this great work. The matter of connecting the two sections of the State, and at the same time developing the mineral regions in the best possible way, was left in my hands alone. The legislature of Alabama was not then aware of the results depending on my actions, as time has clearly shown, or they never would have left this matter in the hands of any one man. The governor of Alabama gave me the law without any instructions. He could give none. The mineral regions were then an unknown quantity. Michael Tuomey was dead. He alone had any just conception where they were, or what they were. If ever a man was surrounded by a sea of difficulties, endless, boundless, I was that man. There was no chart, and no compass, but there was a never-ending show of blue lights all over Alabama saying, Come here, or Go there." Milner received advice and encouragement from Honorable John D. Phelan, and from his father's friend and associate, Samuel G. Jones.

As the section of the Selma, Rome, and Dalton Railroad (now the Southern) between Selma and Montevallo was then completed, Milner adopted Selma as the terminus. He visited the Montevallo mines, then in operation, under the direction of Mr. Browne, builder of the Brighthope furnace. "It was a very little vein," says Milner, "just about two feet thick, and I was gravely told that this was the mineral region of Alabama."

The brown ore deposits near the Shelby iron works, to which Horace Ware called his attention, did not impress the engineer any more than did Montevallo. Mr. Ware was eager to induce the railroad management to divert its railroad from the crossing at Calera and pass through Shelby. To justify extra cost of construction he promised additional permanent freight revenue. Unfortunately for both the railroad and the Shelby Iron Company the proposition was rejected. Not until M. H. Smith's régime, in the eighteen-nineties, was old Shelby placed on one of the mineral branches and ranked as a shipping point. Milner

Down in the Brown Ore Country, Rickey Mine
Tuskaloosa County

Tip-top of Red Mountain, the Great Ore Range of the South
Jefferson County

selected Decatur, at the upper end of the Mussel Shoals, as the northern terminus of the great State road, and a point near Montevallo as its southern terminus. The route for the railroad was projected across the mountains, north and south, via Blount Springs and Graces Gap, just as it runs to-day.

The village of Elyton, in Jefferson County, was considered by Engineer Milner "the center of knowledge on the subject of mineral wealth." He says:

"I rode along the top of Red Mountain, and looked over that beautiful valley where the city of Birmingham lies to-day. It was one vast garden as far as the eye could reach, northeast and southwest. It was on the first day of June, in the year 1858. Jones Valley was well cultivated then. I had before traveled all over the United States. I had seen the great and rich valleys of the Pacific Coast, but nowhere had I seen an agricultural people so perfectly provided for, and so completely happy. They raised everything they required to eat, and sold thousands of bushels of wheat. Their settlements were around these beautiful, clear running streams found gushing out everywhere in this valley. Cotton was raised here also, but on account of the difficulty of transportation, only in small quantities. It was, on the whole, a quiet easy-going, well farmed, well framed, and well regulated civilization." [1]

A contemporary [2] of John T. Milner says: "Milner was a right slow talker, as I remember him, but a good deal of a thinker. He was plain and simple in his habits and tastes, honest, reserved, and direct. As to looks? Well, like Stephen A. Douglas, he was cut off short, you know. I don't think he was more than five and a half feet tall. He had a great bulging forehead and deep set eyes. And, as I say, he was a good deal of a thinker."

That he was a good deal of a thinker is proved to-day by his writings which show him to have been a worker, too. His report, to Governor Moore on the Alabama Central Railroad, published in Montgomery, 1859, is one of the most valuable documents in existence relating to Alabama. But one copy is extant.[3]

[1] Milner's Address to the Georgia Society, 1889.

[2] St. Kevin St. Michael Cunningham of Mobile, Alabama.

[3] Opening with a tribute to Michael Tuomey whose geological map and opinions he adopted "as the groundwork of the operations for developing the mineral region of the State," Milner then discusses the various routes he surveyed across the mountains, and gives an estimate of the cost of construction and equipment of each. He inserts tables showing the maxi-

A few excerpts are as follows:

"The Central Railroad occupies the most important position for the people of Alabama of any enterprise that ever came before them. They have thought and talked over the connection of South and North Alabama, and the development of their mineral wealth for forty years or more, but until the recent survey was made, it has always been considered impracticable to build a railroad through these mountains at a reasonable cost. For the first two months I had nothing to encourage me; but becoming better acquainted with the topography of the country, one difficulty was avoided here, and another there, until I have succeeded in obtaining a line for the Central Railroad that will compare favorably in costs, grades, alignment, and everything else, with the railroads in the neighboring States, and far better than any other route across the Alleghany Range, except perhaps, the Georgia State Road. . . .

"I will not stop here to discuss the importance of developing our coal and iron interests to the State. They are questions of political economy, belonging more properly to the legislator. We have only to read the oft-repeated assertions of the greatest and wisest men that ever lived, that these two minerals underlie and are the real cause of the untold wealth of Great Britain, and to note the great and unrivaled increase in the demand for both these minerals all over this civilized world, to form an idea of the place they occupy among the products of the earth.

"The statistics of the coal trade for thirty-two years show remarkable increase in the amount and value of the production of coal. At the present time, the value of coal annually mined in this country is nearly equal to the yearly production of gold in California. And at the present rate of increase, the coal crops will soon be of greater value. It appears that in 1820, the first year in which coal was mined in Pennsylvania, the amount of production was but three hundred and sixty-five tons, all told.

"Alabama is to the Gulf what Pennsylvania is to the Atlantic States. The amount needed for ten years to come, in all quarters, from our mines, is only conjectural. It is not too much

mum grades of the principal railroads crossing the Alleghany Mountains. He enters into minute detail of the sources of revenue for the great State road: coal, iron, and agricultural products. He compiles a table showing the price of coal at different points accessible by Alabama coal, and cost of Alabama coal delivered at these specified points. Lieutenant Maury's eloquent description of the future importance of the Gulf of Mexico and the Panama Canal, and Major Chase's report on "the importance of coal in the Gulf from a military point of view," are quoted in full, together with many pages of statistics relating to the early mineral development of Pennsylvania and other States. A discussion of canals and waterway improvements is entered upon, and the importance of railroad construction in Alabama dwelt on from every side. — Report loaned by Major Willis Milner of Birmingham, Alabama.

to say we will need three hundred thousands tons per annum. This at $3.15 per ton, the price from Montevallo to the Gulf, will pay $945,000 to three railroads south from Montevallo for transportation, or seven and a quarter per cent on thirteen million dollars, the amount necessary to build three first-class railroads to the Gulf. . . .

"Coal, as a fuel for railway engines, is destined to save millions of dollars. It has been found by actual experiment that the cost of running a locomotive with coal is less than one half the expense of running with wood as fuel. Experiments have been made on the Illinois Central, the New Jersey Central, — in fact, throughout the Northern States; and even in Massachusetts, where coal is worth six dollars and over per ton, it is found that the saving in expense, is equal to one half over wood. From a very intelligent source, the calculation has been made, that the saving from the use of coal instead of wood as a fuel on the railways in the Union will be ten millions of dollars per annum, or one per cent on the cost of the railroads in the country.

"The superintendent of the Cambria iron works writes me that the cost of pig iron to them is seventeen dollars per ton. It is fair to say that we can manufacture iron rails at a cost of fifty dollars per ton in Jefferson and St. Clair counties. I would not advise an attempt at manufacturing iron rails by the Central or Northeast and Southwest Railroad companies, until the coal and iron can be brought together by railroad.

"When the Central is built through the coal mines, and the Northeast and Southwest Railroad along the Red Mountain, we will have every facility for the successful manufacture of iron rails. But if we were to commence now in the woods, as it were, we would work under many disadvantages. The Central might, after reaching Elyton, bring coal to that point and make a beginning. The machinery for iron manufacture is heavy, and the transportation of men, provisions, machines, coal, and iron by wagon would be very expensive. I have an offer from a responsible party to manufacture in Alabama all the iron we may need. He states that he thinks it can be manufactured at fifty dollars per ton. Here we have a positive evidence of the importance of our iron mines.

"In my estimate of cost for the Central Railroad, I put the iron rails at sixty-five dollars per ton, the average price for railroad iron in our State. There are now building in our State, twelve hundred miles of railroad which will require 110,000 tons of iron, which at sixty-five dollars per ton, will be $7,150,000 for iron rails. We can deliver it here at home ten dollars per ton cheaper than we can buy it. This will save to the State outright, $1,100,000, besides the incidental benefits from building up in our own State such an important interest. I know there is an indisposition in Alabama to embark in any new enterprise. Our

people are the most cautious in the United States, and must see before they believe. Suppose the people of Pennsylvania and Ohio had acted thus. To-day we would be paying an exorbitant tribute to Great Britain for rails.

"When I was engaged on the Georgia State road, I became acquainted with the people along that road — their habits, and their means. Beyond their actual wants for food, they raised nothing at all. The men moped around and shot at a mark. The women seemed to do but little, whilst their children, poorly cared for, sauntered about from place to place, as if their highest thoughts were bent on catching rabbits, opossums, or some such small game. What was the use of working, when it would cost them two dollars per bushel to get their wheat to market, and then only get one?

"In 1857 I went back again, and what a change! The rivers were the same, the Kenesaw Mountain had not changed, the 'Crooked Spoon' still rolled along, the men and women that once I knew were there, the boys had grown to men, and the girls to women; but their mien was changed. The old men stood erect, as with conscious pride they looked upon the waving fields of grain. The matrons busied themselves about their dairies and their looms; whilst the sturdy boys were grappling with the plow. What had brought this change about? Listen for a while, and soon you will hear the iron horse storming along. He stops at a station for fuel and water — a man gets off the train. He is a Charleston man, or perhaps the agent of the Montgomery Mills. The cars go on, and he goes to the house. He meets the farmer — they have met before. His business is to buy his grain. Strange but true, that the demand for wheat should be so great as to induce the merchant to buy at the farmer's door. He offers $1.50 per bushel, cash, for his crop and furnishes the sacks to put it in. 'That won't do. Savannah was here yesterday, and Columbus the day before, and they offered more.' Here is the key to this change. This solves the mystery. The great State road — the iron horse — the dollar and a half per bushel, cash, tells the tale.

"It is hard for a man who has lived in Alabama seven years to account for the deep and widespread suspicion and want of confidence in such investments. There seems to be a holy horror, so to speak, of all railroad corporations. We cannot understand why it is, that whilst the States all around us, both in their individual and corporate capacities, are using every exertion to build railroads, the people of Alabama seem to regard them with suspicion and distrust. They seem to be afraid to subscribe to build them, or to have anything to do with them. It must be acknowledged, however, that until recently, the merits of the railway have not been fully tested. The last years have given to us facts and figures that will alter and settle the most cautious minds in favor of railroads. Their great usefulness and public

benefit place them far above any invention of the age in their claims for generous consideration and public favor. They have lately become as much a necessity of the age in which we live as our cotton gins, negroes, and mules, or as our public buildings, schoolhouses, or places of worship, and the only question now is as to the best means to build them. The Central Railroad is acknowledged by all to be the most important road in the State for the interests of the people of Alabama. It will bring them together in a community of interest — social, commercial, and political. It will open to their industry a new field for their energy and capital, by affording facilities for transporting their minerals to market. It will tend greatly to effect their commercial independence by bringing the trade of North Alabama and Tennessee to our seaport at Mobile and establishing there an emporium second to none in the South. It will give to us of the South what the countries in the North most produce, and to these a rich market for all their surplus productions. It will unite the various railroads in the State at its Southern terminus, which, like those of Georgia, will meet there to distribute it. Congress has granted to the road four hundred thousand acres of land, which it can appropriate to building the road, provided it is completed by 1866 — ten years from the date of the grant. If it is not done, the land reverts to the government. In such an event, we know well, we can never get the offer again.

"There is not a man who has seen the effect of the Montgomery and Pensacola Railroad, the Mobile and Ohio, and the Southwest Georgia railroads on the same class of lands, but will say two dollars per acre is a small price for all these lands. Some will command ten dollars and some even twenty dollars per acre. Six years ago I came to Butler County on the survey of the Pensacola Railroad, and actually had to take my corn along from Greenville, south; and just before, in the same region, our probate judge bought a section of land for $67, and the year the road was located sold it for 1,070, bought it back again, a few weeks after, for about $2,000, and the other day asked what I thought of his taking from $12.50 to $15 per acre, or from $8,000 to $9,600 for it. This is pine land, and but the type of hundreds of thousands of acres more in southeast Alabama that need but the iron rail to make them whiten with the snowy fleece. Six years from next May remain to build these roads, or we lose the land, which, once reverted, we all know well can never be regained. We have now 1,180 miles of railway, built, building, and part provided for, intending to reach, at some future time, a market at Mobile, from the northeastern part of the State alone, that must cross the marsh if they reach the city. But this miry, muddy, bottomless swamp lies just in the path of all, and which there is, as yet, none so bold as to attempt to cross.

"Next, the Central Railroad must be built, and right away, if we wish to get the active aid of North Alabama and turn the

two great arms of the Memphis and Charleston Road into feeders for our trade.

"The road from Nashville to Decatur is a part of the New Orleans, Jackson, and Great Northern Railroad, projected by the city of New Orleans direct to Nashville and Louisville by way of Jackson (Mississippi), Aberdeen, and Tuscumbia, and once recognized by Nashville, as her road to the Gulf. Our citizens of the North have, by their energy and ability, thwarted the intended alliance, and induced the Tennesseans to come to Decatur, at the foot of navigation, on the upper Tennessee, in the center of the great valley of North Carolina. New Orleans has silently watched the move, and has simply stopped to breathe and look around. From the late reports of the Nashville railroad companies, we find, that for want of faith in our works, they have turned their eyes to New Orleans again, by way of Decatur and Aberdeen. This must be checked by a certain show of work, or New Orleans, backed as she is by the State of Louisiana, will stretch her arms across from Aberdeen to Decatur, and thus close forever our hope of getting aid from North Alabama to unite our hitherto dissevered State, and to develop the mineral wealth that lies right in the path to our seaport city. If this movement can be stopped, we can give to New Orleans from Decatur, by the Central Railroad to Elyton, and then by the Northeast and Southwest Road and its certain extension from Meridian to New Orleans, a route twenty miles shorter than by way of Aberdeen, Canton, and Jackson, Mississippi.

"She certainly will build the road from Meridian to New Orleans, and by adopting our line can save the building across the mountains from Aberdeen, and get a shorter line; but unless we move in twelve months, it will go on, and then we will lose from off the Central Road, if ever built, the trade from Nashville to New Orleans — no small amount. On the Atlantic side, the two great rivals, Charleston and Savannah, are in the field again to reach Memphis — destined soon to be the greatest city in the South — on their shortest route by way of Jacksonville, Guntersville, and Decatur, in this State."

The report made a voluminous document. The route designated by Mr. Milner was practicable and feasible, and the cost placed at an exceedingly low figure. The engineer had been, as he afterward expressed it, "raised and educated in the Georgia system of railroads, every one of which was paying dividends." He accordingly outlined his railroad on Georgia principles.

The report was presented to Governor Moore in the latter part of 1859. The governor sent it in to the legislature with his recommendation, stating in his message that the young

engineer had, in his judgment, performed his duty ably and well. It passed into the hands of the senator from Calhoun, Judge Thomas A. Walker, and of the senator from Dallas, Honorable J. M. Calhoun, on a Saturday afternoon. The first thing Monday morning, or as soon as the rules admitted, Judge Walker made a motion to lay the report on the table, and proceeded to make a speech to kill it.

Milner remarked of this episode: "I felt that I was on trial, and every word of that speech was burned into my soul. The judge began by remarking that the State had already pledged her faith to build a road via Guntersville, and that if the two roads were begun they would both fall by the wayside, and if completed, they would never pay on account of their competition with each other." Referring to the region through which the projected line was to pass, Judge Walker made a statement that spread all over the State in a very short time. "That country up there," said he, "is so poor that a buzzard would have to carry provisions on his back or starve to death on his passage." This saying characterized the Hill Country for many years.

Then, leaning over the table, the judge took up the heavy manuscript. "Who is this engineer who writes this great book of instructions and recommendations to the legislature of Alabama, and asks that this mess of trash be published at the expense of the State? His very statement of the cost of building this railroad is satisfactory evidence that there is no reliance or confidence to be placed in his report or in his statements. Who is he, anyhow? I never heard of him before he was appointed by Governor Moore."

John Milner, sitting through it all, observed afterward, "This was my first attendance on the legislature of Alabama, and, if what Judge Walker said was true, I was a gone-up man."

But Judge Walker's verdict was not the only one. Judge Calhoun followed, "and," said Milner, "when Calhoun got through I felt like a convicted felon!" In the face of this opposition, however, a motion was made by Senator Burnett of Butler, that the report be printed. Governor Patton seconded it. A few others spoke in its favor, but it looked dead, as dead as any railroad measure was ever killed in Alabama. George S. Houston then took hold personally, and used his influence to have the report printed. "I have never ceased to thank him,"

Milner said; "that was the turning point of my life, and then and there was the beginning of the city of Birmingham."

Thus the report was printed, and became, in reality, a State paper, making a sensation all over the South. The statistics were used generally throughout Alabama by railroad promoters and speakers for the next twenty years.

CHAPTER IX

INTERNAL CONDITIONS OF STATE AND OUTBREAK OF WAR

Struggles of the South and North Railroad. Alabama more interested in States' rights than in railroads. Cotton alone was "gentlemen's trade." Isolated condition of iron-masters. Facts are stubborn things. The State pronounced indubitably weak in industrial affairs. Gathering of the thunder heads. Civil War breaks out. Coal and iron business steps to the front. Josiah Gorgas appointed chief of ordnance of Confederacy. Career of General Gorgas. His command of Old Mount Vernon Arsenal. Marriage to daughter of Governor Gayle. Military facts of South. Bird's-eye view of ordnance affairs. Limitations of Confederate States. Tactics of the master soldier. Steps in making of ordnance department. Organization of Confederate Nitre and Mining Bureau. Stimulation of coal and iron production. J. W. Mallet detailed at central laboratory. How the greatest department of the Confederacy was created "out of nothing." Testimonials of colleagues of General Gorgas. A great military feat.

LIFE was not given to the South and North Railroad, the great State road, until the year 1860, when the legislature of Alabama passed the law adopting John T. Milner's recommendations as to the route and granting a loan of $663,135, "on condition that the entire line be graded and prepared for iron by the end of five years." Frank Gilmer at once merged his various other interests into the one railroad. A company was formed in the fall of 1860, with Milner still chief engineer, to complete the line in the five years stipulated. Just at this particular time, however, Alabama was more interested in discussing States' rights than she was in railroad enterprises.

Cotton was the principal industry, the one idea, the one hope of the majority of Alabama men. Cotton planting was "gentlemen's trade," whereas iron making and railroad construction were considered of service where they contributed solely to agricultural interests. The sum total of operations in the coal and iron business in the various counties of the mineral region was not then known. Owing to the lack of railroad communication and mail facilities each county was more or less isolated from the others. No union of coal or iron men was

possible, or dreamed of. The few iron-masters of Calhoun and Talladega counties were as far away from the iron-masters of Tuskaloosa, Bibb, and Shelby counties as though hundreds of miles separated them. Nothing pertaining to the industry had then penetrated the State at large, as is evidenced to-day by the complete lack of public records or statistics referring to the matter.

"Under the régime of the cotton planters Alabama is weak in her internal improvements," said De Bows, in 1856, "weak not only in the little already accomplished, but weak in the disinclination of capitalists to invest their means in a way to advantage the people and promote State welfare. . . . Facts are stubborn things. Let us then look them in the face, nor attempt to mollify harsh features. . . . What becomes of the twenty-five million dollars which our commerce distributes annually among the planters of Alabama? The census of 1850 states that in Alabama one million dollars only is invested in manufactures, a portion in twelve cotton factories, and fourteen forges and furnaces, as compared to Georgia's two million and Tennessee's three million." This plain speaking critic of early industrial affairs points out the prevalent conditions. He deems the causes, "lack of public spirit, no foresight, an utter indifference to the future, . . . an unsettled state of feeling as though Alabama were a temporary, not a permanent, home, . . . no means to fix population."

And again John Milner speaks:

"As yet, the State of Alabama has done nothing to divert the enterprise of her citizens in their internal improvement investments into the channel that would tend most to develop the resources of the State, and render her people commercially independent. Alabama has been a kind of public common, and all of our neighbors have quietly proceeded to partition her off among their own great seaport towns, with but little hindrance either from the people or the government. . . .

"The State of Georgia charges two dollars per ton on Alabama iron seeking a market over her roads than she does on Georgia iron. We know but little of the future. Three fourths of a century ago the questions that now threaten to destroy the Union of the States were not felt at all. The history of confederated republics teaches that they are not everlasting, and that each State, or section of the confederacy, must, from time to time, fall back to its original isolated condition. The elements which will return the States to their original condition are now at work all

over the Union, and the United States may soon be so many independent sovereignties, each challenging, as of yore, the commerce of its neighbor, and then woe to the State that has looked quietly on without an effort to aid in directing the enterprise of her citizens to the developing of her own resources when it was practicable, and has suffered her life blood to be drawn away to build up commercial centers for her people, on soil over which she can exercise no control, and in passing through which she will be subjected to the mortification of seeing the labor and industry of her citizens taxed almost to prohibition and ruin. Alabama now occupies this position, and the only practicable measure that can redeem her from threatened vassalage is to turn these depleting railroads into feeders for the great central arteries leading to Mobile, and making for Alabamians a commercial emporium there that, in case of accident, will offer every facility for the perfect transaction of all their commercial business. Let us prepare ourselves, and if the storm blows over and the States of South Carolina, Georgia, Tennessee, Florida, Mississippi, and Louisiana stand by us in friendly alliance, all is well. But if not, let us be able to say that Alabama is independent of the world anyhow, and all is well still.

"Were it not that our senators and representatives in Congress, sentinels on the watchtowers, are continually warning us of the threatened dissolution of the Union, and the consequent overthrow of that Constitution which authorizes free trade between the States, and our certain return to our original isolated and self-dependent condition, I would look with gratitude upon these enterprises of our neighboring States to develop the resources of Alabama, and would not lament over the exhaustion of what little individual capital we now have in our State in these foreign enterprises. But I fear they are thus helping to forge for themselves the commercial chains which, in case of accident to our confederacy, will bind them to pay tribute forever to the States, within whose borders lie the great centers of trade they have helped to build up."

As for the great State railroad, Frank Gilmer was pushing its construction along and finding it uphill work. The clouds of war were now gathering in every quarter of the horizon. The Limestone County stockholders abandoned their interests in the railroad. Gilmer took up their subscriptions, and released them from their obligations. It could be foreseen that when the war was over, come what would, this great railroad enterprise would be a blessing to Alabama. Gilmer now controlled personally a three-quarter interest in the Central, and he changed the terminus from Montevallo to Calera. Together with his brother, William Gilmer, John T. Milner, and several

of the Montgomery stockholders, chief among them Daniel Pratt, Gilmer arranged for the construction of iron works to use the Red Mountain ore. The construction of this — the first furnace of Jefferson County, the Oxmoor plant — will be detailed in a subsequent chapter.

At the bursting of the storm the South and North Railroad was just approaching the mineral region, having crossed the borders of the Cahaba coal field. Construction work was then suddenly paralyzed for lack of funds. At length Colonel Gilmer succeeded in getting aid from the Confederate Government, and the railroad was extended from Calera to Brocks Gap, near Goold's coal mines. This gap, a sixty-foot cut of solid rock several hundred feet long, through the backbone of Shades Mountain, was an obstacle Gilmer could not surmount. His contractors, unable to secure powder, put their men on the work with crowbars and wedges. The railroad was graded only as far as Graces Gap during the war. This cut was not finished until two years after the war, under Superintendent J. F. B. Jackson. In 1908 the mountain at Brocks Gap was tunneled by the Louisville and Nashville Railroad authorities.

At this early period practically every railroad in the State received some aid from the Confederate Government, and the shackles, heavy upon the coal and iron business, were thrown off. The mineral region got now its first chance. Every policy, every energy, every industry of Alabama now became resolved into a war measure. The large majority of railroad, coal, and iron men had voted against secession. Only when the issue became irrevocable did they stand by the State.

From this time on until the four years' strife was stilled, the products of mine, furnace, mill, forge, shop, and foundry were such as to surprise not only the State, but the whole country. A sudden and tremendous activity now charged the mineral region.

And not precisely an automatic movement this! As it is always found, there was a man behind the guns. This man was Josiah Gorgas, appointed chief of ordnance of the Confederacy, April 8, 1861, with rank of brigadier-general.

Up to his resignation from the United States army, a few weeks previous to his appointment in the Confederate army, General Gorgas had seen twenty years of service. Not only had he served at the various depots and arsenals of the States, north

and south, but he had also been assigned in Mexico, and had had, too, the advantage of a tour of study and inspection abroad. Josiah Gorgas was born in Dauphin County, Pennsylvania, in 1818, the year the first blast furnace of Alabama was erected, and the year also that witnessed the birth of James R. Powell and Josiah Morris, who in 1871 helped John T. Milner found the city of Birmingham.

Young Gorgas received appointment to the West Point military academy in 1837, and graduated in 1841. Among those at the old barracks with him were William Tecumseh Sherman and George H. Thomas, one class above, and Ulysses S. Grant, two years below. Mr. Gorgas' class rank lifted him to a place in the engineering or ordnance department. He obtained one year's leave of absence in 1845, and went to Europe. By nature keenly and quietly observant, thorough and painstaking, Lieutenant Gorgas' inspection of arms and arsenals abroad was no superficial essay, but a well ordered and systematized undertaking. On his return he was ordered to report to the Watervliet Arsenal in New York State as assistant ordnance officer. At the outbreak of the Mexican War the young lieutenant went on field duty. He served with distinction, it is officially recorded, at the siege of Vera Cruz. And when that point was captured Lieutenant Gorgas assumed command of the ordnance department there. Reporting back to Watervliet, at the close of hostilities, he served there and at various northern points until early in 1853 when he was placed in command of Mt. Vernon in Alabama.[1]

As a matter of course the courtesies of Mobile were extended the young officer, and *entrée* into the homes of the leading families of that city at once accorded. At the home of Honorable John Gayle, in particular, the young lieutenant of ordnance became a frequent guest.

Old Judge Gayle, statesman-like and convivial, was one of the celebrities of the times. He was governor of Alabama during the period when the first railroad of the State was chartered. Having entered the country in territorial days, he had held positions in the early legislatures, the circuit and supreme courts, had served as speaker of the House, and had later been appointed

[1] Data obtained from Records of the War Department; Southern Historical Papers loaned by widow of General Gorgas, William Garrett, and various other Alabama historians.

by President Taylor judge of the United States district court, which office he held until his death in 1858.

It was not so much the judge, however, who drew the young West Pointer as the judge's daughter Amelia. Miss Gayle was a young girl of a pronounced grace of mind and manner. She was, indeed, very like her mother, and her mother was a singularly charming woman. During Andrew Jackson's administration when Francis Scott Key was sent to Alabama on a mission to Governor Gayle — ever a States' rights man — the author of the "Star Spangled Banner" was the governor's guest in the Old Manse at Tuskaloosa. He wrote a sonnet to his hostess that in those days was widely quoted.

Of the several daughters of Governor and Mrs. Gayle, Mary became the wife of General Hugh Aiken, and Amelia married Lieutenant Gorgas a few months following their meeting, and they went to live at the gloomy old Mt. Vernon arsenal. And here, among the 1812 guns and under salute of the flag, in the year 1854, their first child was born, their son, William Crawford Gorgas, destined in the later years to achieve such fair public record in the medical department of the United States Army. He was later appointed colonel by special act of Congress for his work in staying the yellow fever ravages at Havana, and in 1909 has made the Panama Canal Zone a habitable station.

Lieutenant Josiah Gorgas was promoted in 1855 to captain of ordnance, and in the following year transferred from Mt. Vernon to Kennebec, Maine. He was then assigned to command of the arsenal at Charleston, South Carolina, and in 1859, to Frankford Arsenal at Philadelphia. In October of 1860 he was selected as a member of the ordnance board detailed to serve at the war department, in Washington, District of Columbia. It was this latter circumstance coming atop of his already varied and extensive service that enabled Josiah Gorgas to obtain his rather remarkable and specific knowledge of inside conditions in things military. For instance, at the capture of John Brown, at Harper's Ferry, certain correspondence between Brown and the chief of ordnance of the department at Washington came, as a matter of course, under Captain Gorgas' eye. These papers gave information of the state and condition of the ordnance stores in the United States, and pointed out the facts that such supplies throughout all the slave-holding States were inconsiderable, and that, in some localities, utter destitution prevailed. Every mili-

tary fact relating to the South now stood out in sharp outlines to Captain Gorgas' vision. He could not deceive himself, could conjure up no flying pennants or drums of victory.

Bound to the South as he now was, by ties of family, of friendship, and of intimate alliance and marked sympathy with the political conditions of the isolated section, he had come to believe that her cause was just, and he knew that she was weak. At the same time, attached as he was to the service, to his brother officers, and to the Union, bred as he had been on the standards of the United States Military Academy, his decision to resign came out of a night in Gethsemane. So was it, indeed, with many and many another over whom spread the delicate wings of the spirit of old West Point! It is written of Captain Gorgas that this decision "involved the most painful act of his life."

General Morris Schaff says: "I cannot think of those days or of my friends of the South, haunted as they were by a specter which no casuistry could bar out, most of them later to climb the hill of old age and poverty, with the past lying below them in the shadow of defeat, — I cannot think of all that without seeing West Point suddenly take on the mysterious background and fated silence of the scenes of the Greek tragedies. But, thank God! over the voices of the Furies I hear Athene pleading for Orestes." . . .

Captain Gorgas left Washington. He came again to Alabama which he had now adopted as his State, and quietly entered civilian life, taking up residence with his wife and children in Mobile. President Davis at once invited the experienced and efficient officer to take the position of chief of ordnance of the Confederacy. He accepted, and at once assumed what General Bragg has termed, "the most important scientific and administrative position in the Confederate Government." As has been indicated, Captain Gorgas was fully and minutely informed of the precise status of ordnance affairs in the Southern States. He realized acutely, as did other officers of the United States army, the utter impotence of the South, from a military viewpoint, to sustain a prolonged conflict. He took up the burden fully aware of its weight. He stood alone in a barren field, his eyes wide open. Sweeping the horizon, he saw not a gun, not even a mountain howitzer, fit for service.

The gathering Confederate forces mustering in all over land, huge and heedless, were practically destitute of arms and am-

munition, of infantry accouterments, cavalry equipments, and artillery. They were not even prepared to take the defensive, much less essay offensive. What few guns they had were mainly 1812 relics. The only ammunition in store was useless stuff, left over from the Mexican War, cramping the arsenals at Mt. Vernon and Baton Rouge. There was not in the entire Confederacy one million rounds of small arm cartridges. The small arms were almost wholly smooth bore, altered from flint to percussion. Of percussion caps there were less than a quarter of a million, and no powder, barring 60,000 pounds of old cannon powder captured at Norfolk, and distributed in small quantities throughout the arsenals. Not a single battery of serviceable field artillery was to be found at any point.

Furthermore, the Southern arsenals had no means for constructing any of the material of war, having served always as mere depots, distributing centers, and points of rendezvous. Not a single machine above a foot lathe was installed anywhere excepting at one station in Fayetteville, North Carolina. Not an arm, not a gun, not a gun carriage, beyond the jejune workings of Andrew Jackson's smiths, had ever been constructed in the South. Not for fifty years, except during the Mexican War, had a single round of ammunition been prepared in the Southern States. No powder other than for blasting had been made. There was neither powder mill nor laboratory. Neither lead nor saltpeter was in store anywhere, and the only lead mines were on the northern limit of the Confederacy in Virginia, — a precarious situation. Copper was but just beginning to be produced in East Tennessee. Coal or iron mines were, to the military authorities, scarcely tangible propositions. Blast furnaces were an unknown quantity. But one cannon foundry existed, that at Richmond, and but two rolling mills, one at Richmond, Virginia, the other at Shelby, Alabama. There was no skilled labor. "Not a single manufactory of either arms or munitions was within the limits of our country," General Bragg has observed. But there were one hundred and fifty thousand men marking time on both sides the Mississippi, infantry, cavalry, and artillery regiments, waiting to be equipped by May 1, 1861, — and here it was April 8, 1861.

Knowing all the facts beforehand, General Gorgas had but to take one falcon look. Then quickly he swooped upon the Montgomery legislators. His estimate of the needed preparations

1. Baylis E. Grace
2. Samuel Noble
   Founder of Anniston
3. General Josiah Gorgas
   Chief of Ordnance of the Confederacy

1. Major "Tom" Peters
2. John T. Milner
   Founder of Birmingham
3. Colonel J. W. Sloss

stunned that body. Expecting to whip the North in a ninety days' fighting, Montgomery had no intention of standing for any such outlay as the West Pointer called for. There was nothing for General Gorgas but to make the best of what limited means were perforce granted him for the creation and control of his own special department, involving as it did problems of mining, of importations, manufacturing, transportation, on a scale nation wide.

He had in the history of hero-mankind one predecessor — Cadmus — and but dragon's teeth to sow in very truth! Only that which he had at his fingers' ends, his West Point science, and the fruit of his twenty years being among the growling guns. By this alone, and backed by the Confederate Government, he must breed out of the very dust of the earth armed men and guns and belching batteries. By tracing his way, step for step, the whole miracle that he wrought is discerned to have been an exceedingly simple business, merely a matter of organization, of system, of technique, and hard work.

General Gorgas' first move was to detail an efficient officer abroad to secure arms at certain designated foreign points. Captain Raphael Semmes was also on a hunt for skilled labor and munitions of war, having been sent north by President Davis directly after Alabama had passed the ordinance of secession. General Gorgas then at once undertook measures to improve and increase the equipment of every government concern, and impress or make contract with every iron making establishment already on the ground. Mt. Vernon Arsenal was furnished with steam power and new machinery. A foundry at Rome, Georgia, that of Noble & Sons, was induced to undertake the casting of three-inch rifles after drawings furnished at Montgomery. The iron works at Holly Springs, Mississippi, were already turning out ordnance supplies under contract with the government. Immediately preparations to manufacture powder and saltpeter were begun. Two sub-bureaus were created to handle the mining and importation ends.

A corps of officers having in charge the production of iron in Alabama for the use of the Confederacy was organized under title of the Confederate Nitre and Mining Bureau. This board, through the government, either bought the properties outright on liberal terms, or gave financial assistance, money to be refunded in products. Fifty per cent of the cost of equipment was

offered to private owners to encourage opening of new coal and iron mines. Several hundred conscripts and several thousand negroes were employed in the mines and rolling mills. Coal and iron production was stimulated not only throughout Alabama, but all through Virginia, North Carolina, Tennessee, and Georgia. All workers in any branch of government employment were exempt from military service in the field, although required in the ordnance department to be drilled daily and trained for every emergency.

General Gorgas, now directing operations from Richmond headquarters, located new arsenals and depots (twelve all told), work shops, armories, foundries, and laboratories in every Confederate State. The greatest of these, the arsenal at Selma, Alabama, will be approached shortly. Points were selected as remotely as possible from chance of attack, yet near enough to some main line of railroad to have transportation facilities. General Gorgas was careful to make choice of agricultural sections so that cheap living could be assured the operatives. He took no chances.

At the central laboratory at Macon, Georgia, he detailed in command a chemist and a scientist of national reputation, J. W. Mallet, then a professor at the University of Alabama. He could thus be sure that under expert direction his ammunition would be made uniform in quality and in dimensions, and made so that it could fit the guns and the cannon for which it was designed. For one of the first problems confronted by the department was how to render serviceable the odd and miscellaneous collection of arms with which the early regiments were equipped. General Gorgas everywhere selected officers with discrimination: experts, scientists, technical men. The officer he appointed in command of the Richmond Arsenal was William Le Roy Brown, a distinguished educator, who later became identified with Alabama's progress in his twenty years' service as president of the Alabama Polytechnic Institute at Auburn, where he was succeeded at his death, in 1902, by Charles C. Thach.

In view of the uncertain chances of supply of materials from the North, or across seas, General Gorgas sent an order far and wide to gather together all sorts of odds and ends of materials from domestic sources.[1] The country was raked for leaden

[1] Lieutenant-Colonel J. W. Mallet, C. S. A.

water pipes and window weights out of which to make bullets; for church bells and old sugar boiling kettles that could be melted and rerolled into thinner copper for percussion caps; for worn-out tools, farming implements, and machinery of no more use for house or farm that could be converted in various ways into material of war. That is the way the ordnance department of the Confederacy was created, "out of nothing."

General Gorgas says himself that the beginning time from 1861 to 1862 was the darkest period in the ordnance department. Powder was being demanded on every hand, guns were being called for in all directions, "the largest guns for the smallest places." Everything had to be extemporized — guns, swords, pistols, spurs, haversacks, tents, artillery harness, cavalry saddles, bridles, bits, trace chains, horseshoes, soldiers' shoes, cartridge boxes, belts, canteens, hollow ware — the whole inventory from "A to izzard" of the make-up of the soldier in the field and in every branch of the service. Very early in the war, as General Gorgas foresaw, the blockade was so effective as to cut off the Southern States from supplies by sea as well as by land. "Alabama," writes the historian, Walter L. Fleming, "owing to its central location, suffered more than any other State." He speaks also of the development of diversified industries born out of the exigencies of the times as well as of necessity for production of materials of war.

The picture shows handicap after handicap; no stock on hand and no labor but the shiftless and unskilled slave hands, and they could only be utilized in subordinate departments. Often when workmen were gathered and were being trained, the department had frequently to give them up in answer to the pressing call for more men in the ranks. Moreover, a portion of their duty was to organize and drill battalions for temporary service, "for ordnance men, at the anvil and file one day, had to shoulder the musket the next," states Lietutenant-Colonel Mallet. Furthermore, the wants of these men and their families for food and clothing had to be considered and supplied. And there was lack of adequate transportation even for food supplies. As time passed, and the enemy pressed nearer, whole establishments that had taken months to create had to be quickly removed, and the machinery and materials and the men and their families transported to new quarters only to be again dislodged. To further tangle affairs came depreciated currency. The want of

money of purchasing value was felt in every branch of the service, first and last. Our Assistant Inspector-General, Major J. F. Girault, reported late in the war at Richmond: "The soldiers are not paid, and the people hold claims against the government of long standing. The credit of the government is greatly impaired, and nearly all its officers and agents are crippled in important transactions for lack of funds. Bonds and certificates are not available." Moreover, the whole country was throttled by the blockade.

In the face of all these handicaps General Gorgas and his able corps of officers built up in a little over two years foundries and rolling mills, smelting works, the best equipped powder mill in the United States, and a chain of arsenals, armories, and laboratories equal in their capacity and their improved appointments to the best of those in the United States, and stretching link by link from Virginia to Alabama. And to do it took sharp, quick work. It was not work that attracted such public attention as though Gorgas had been at the front. Yet no officer in the Confederate Army had a more important post. Not one contributed more to the measure of the success won by our troops in the field than he. Not one has been accorded less public recognition.

"His patient industry, high scientific attainments, and great administrative capacity soon placed us above want. He remained to the end of the war at the head of his department, and grew in favor as time and means enabled him to develop the dormant resources of the country." [1]

Lieutenant-Colonel Mallet says:

"Of General Gorgas himself, during those troublous times, three impressions especially occur to me: first, the quietness of demeanor and absence of impatience or confusion with which his work was done; second, the capability which he possessed of working through subordinates. Clear and decided in his general instructions, he was always ready to give to officers under him the amplest field in which to exercise their own discretion and ingenuity as to details, to show what they could do in the way of overcoming difficulties and accomplishing results, and no one could be more fair, more generous in recognizing whatever individual merit was thus exhibited by his subordinates; no one less anxious to claim such merit or praise for it for himself; third, the breadth of view with which he continually strove, not

[1] General Braxton Bragg, C. S. A.

merely to keep up with the overwhelming demands on each day and each month for war material for immediate use, but to steadily improve the organization of the bureau under his charge; to make it more efficient in personnel and material. The workmen in the shops had a wonderful admiration and esteem for him. Gentle and quiet in his manners, without an effort he exercised the most perfect control of his men."

Jefferson Davis remarked in a letter referring to Gorgas' work:

"There is much to learn of the struggles which were made to maintain our cause by those who gathered no laurels in the field, but without whose labors there would have been no laurels to gather." And he highly commends the chief of ordnance, saying, "He achieved results greatly disproportioned to the means at his command."

As Lieutenant-Colonel Mallet clearly states:

"General Gorgas created and managed the most efficient bureau of the Confederate war department, that bureau which was based upon the most scanty resources at the outset, which was called upon to respond to the most special, the most varied, and the most urgent demands, and which was developed to the highest degree of efficiency in spite of the serious difficulties arising from the ever shifting conditions imposed by the events of the war."

To again quote Braxton Bragg:

"It was the only successful military bureau organized during our national existence," and all the more surprising, the general further declares, "because Gorgas has less foundation to go on than had any other officer in the Confederate service."

Certainly it is a distinctly great military feat, one of the greatest on record in any land. Its immense significance may, perhaps, be grasped in full measure only by the military man or those intimately conversant with military affairs. It is not recorded in any history in any detail whatsoever. As the long hidden facts come one by one slowly into public view, it is perceived that the character of the ordnance department of the Confederacy that until now has hovered a silent, shrouded figure in the background of the battle field, moves to the front. By reason of the odds it hurled against and overcame, it stands forth in a bright light, winged and triumphant.

CHAPTER X

CONFEDERATE ARSENAL AND NAVAL FOUNDRY

Arsenal transferred from Mt. Vernon to Selma. Most advantageous point in Confederacy for manufacturing purposes. Description of Arsenal. Summary of auxiliary works. Confederate army officers stationed at Selma. Career of Major J. C. Compton. How John Veitch came to the arsenal. Major Thomas Peters and Matthew Thomas Smith report for duty. Milton H. Smith handles transportation of Confederate troops with masterly hand. Review of young Smith's work. Establishment of great naval foundry. Confederate naval officers in charge. George Peacock engaged by Commander Catesby ap R. Jones as superintendent. Achievements of the English foundryman. Early records of pipe business of United States. Churchill and Company's iron works at Columbiana. Shelby County. How the great guns were cast at the foundry. Making of the flagship *Tennessee*. Contemporary workshops and armories. Auxiliary works in Montgomery. Richard Fell's record. Christian F. Enslen in the ranks. Reconstruction of quartermaster's department by John Mason Martin.

THE embryonic period in the formation of the Confederate ordnance department having passed, there came the word of the fall of New Orleans in 1862. It sounded throughout the Confederacy as brave Pushmataha said his own death would sound to his tribe in Alabama, "like the fall of a big tree when the wind is still."

At once perceiving that Mt. Vernon was out of position, owing to its proximity to Mobile, General Gorgas ordered the arsenal and all its holdings transferred to Selma. The "Bluff City," named and built up, as will be recalled, by one of the early vice-presidents of the United States, William Rufus King of Alabama, was, by all odds, the most advantageous point in the Confederacy for manufacturing purposes. Far from the enemy's lines, and located in the heart of the black belt, it was accessible by stage, river, and railroad. Not only was it the chief market town for the surrounding country, but it was, at this era, main headquarters for artisans, mechanics, and trades people, and called for that reason the "Pittsburg of the South." The facilities here for the production of cartridges, saltpeter, powder, shot and shell, and for the assemblage of lumber, coal and iron,

were greater than at any other point then existing in the South. Selma, therefore, became the main depot of equipment for troops and fortifications, for the manufacture of every sort of war material for the Confederacy.

The Union general, E. F. Winslow, pronounced the value of these Selma works, established in the main by General Gorgas, "from a mechanical, social, and war point of view, almost inestimable." According to Miller, "In no two years of her history did Alabama make greater manufacturing strides than from 1863 to 1865."

For the making of the great arsenal a site was picked out directly overlooking the Alabama, known to-day as "River View," then a rambling collection of cotton sheds sprawled over a ten-acre field. Just as the Richmond arsenal was improvised in one night by General Gorgas, out of a group of tobacco warehouses, so now these Selma cotton sheds were swiftly remodeled into great shops, while other frame structures were added, making twenty-four in all. These buildings were fitted up with engines and machinery of every description for the manufacture of artillery and small arms, ammunition, siege guns, carriages, caissons, cartridges, ammunition boxes, chests, gun caps, and shot and shell. Each allied department, such as lumber, coal, and resin, was systematically organized. The arsenal's powder building alone (under charge of W. R. Rogers) covered five acres in the eastern section of the town. Men, women, and children to the number of eight hundred were employed, and this number gradually increased to almost double by 1865. The total number of Confederate government employees at Selma has been estimated at ten thousand. John Hardy says: "The city was a perfect jam of people." The existence of the following works in conjunction with the Confederate arsenal will convey a notion of the extent of the activity: Central City Iron Works, Captain H. E. Ware; Central City Foundry, W. S. Knox, M. Meyer, W. R. Bill, S. C. Pierce; Dallas Iron Works, John Robbins, Jacob McElroy; Alabama Factory, Thomas B. Pierce; Saltpeter Works, Jonathan Haralson; Phelan & McBride Iron Works, Brooks & Gainer; Campbell's Foundry, Selma Iron Works, Pierce's Foundry, Nitre Works, comprising eighteen buildings and five furnaces; Washington Works, Tennessee Iron Works, Horseshoe Manufactory, Selma Shovel Factory, and various roundhouses.

Among the officers of the Confederate army stationed at the arsenal at various intervals during the war were Colonel James L. White, Major J. C. Compton, Lieutenant R. V. Chambliss, and Captain R. M. Nelson who was inspector of arms. Colonel White was the officer in command. Concerning him are the following notes received from the adjutant-general of the United States army:

"The official records show that James L. White was appointed from Florida as captain of artillery, Confederate States army, to rank from March 16, 1861, and that he was appointed to the temporary rank of lieutenant-colonel, to rank from August 27, 1862. He was assigned to duty at Mt. Vernon Arsenal, Alabama, April 1, 1861; to Brierfield Arsenal, Columbia, Mississippi, December 3, 1862, and to Selma Arsenal, Selma, Alabama (date of record not found.) He is reported as lieutenant-colonel, commanding Selma Arsenal in 1862, 3, 4, and as late as January 28, 1865. No further record of him has been found."

Major J. C. Compton served under Colonel White as second officer in command during the last year of the war. He had had a rapid rise from the ranks, was appointed early in 1863 an officer of the ordnance, and had personal charge of the ordnance depot at Vicksburg. Later he served at Meridian with Johnston's army, and from that post was assigned by the secretary of war, to Selma. Major Compton's family was of old Colonial stock. His father served in the War of 1812, and was at one time surveyor general of the State of Georgia. Major Compton was a Georgian by birth and a graduate of Oglethorpe University. Since the war's close he has practiced law at Selma, and has served several times as State senator and president of the Senate.

Among the several hundred men located at the old arsenal were a few who became associated years afterward with affairs in the Hill Country. The Veitch boys, Thomas S. Alvis, William Wallace McCollum, Matthew Thomas Smith, and Major Thomas Peters were among them. The Veitch boys were sons of an old North Carolina iron-master, John Veitch of Lincolnton, who had made shot and shell at his father's forge, for the South Carolina Nullifiers, back in 1832, at the time the Stroup family worked there. The Veitch sons were all brought up to the trade, and located in various sections through the Southern States.

One night in the late summer of 1861 at Jacksonville, Ala-

bama, they attended a meeting at which Honorable J. L. M. Curry, M. C. (standing under a flag that had within its folds smoke of Manassas), made an eloquent war speech. The Veitch brothers dropping their tools, John in the lead, to shoulder muskets, enlisted in Selden's battery. At Mobile it was found they were skilled iron workers, so they were detailed along with Glidden's nephew, J. J. Mitchell, to Selma. Here they remained until the war's close. They were among the first furnacemen and foundrymen of the Birmingham and Sheffield districts, and their sons and grandsons are at work in the same field to-day.

Thomas S. Alvis was a furnaceman from Virginia. He had served his apprenticeship at the Old Dominion Nail Works and the Tredegar Iron Works at Richmond. As one of the experts selected by General Gorgas' agent, he came to Selma with a group of other skilled artisans. He worked at the arsenal and constructed the rolling mill at Helena. After the war he located at Brierfield, and with Giles Edwards rebuilt the plant there in the late eighteen-sixties. After acting as superintendent for a time, Captain Alvis leased the furnace from General Gorgas in the seventies, and made iron for car wheels. His youngest daughter is the wife of James G. Oakley of Bibb County, Alabama, whose father ran the Ashby Brick Works before the war.

William McCollum was a steam engineer in the arsenal. He had located in Selma as a boy, working first at steam and mechanical engineering and later as a tin and coppersmith and sheet-iron-worker. At the outbreak of the war he furnished supplies to the Government, and when materials gave out, he enlisted in the army and was assigned to the arsenal. He later became identified with Brierfield, and probably has retained more information relative to the great ordnance depots at Selma than any living man.

Matthew T. Smith, one of the iron-workers at the arsenal, was an ex-cavalry man. He had served on the firing line at Corinth together with his brother, Anthony Smith, but after one year's duty was transferred to Selma. Young Smith was, like Michael Tuomey, an Irishman born and bred, and of a family of soldiers and scholars. He ventured into the States early in the eighteen-fifties, and when the Civil War broke out, he and his brother were located at Camden, Alabama, in the carriage and wagon making business. M. T. Smith worked at the arsenal until 1865,

when he returned to Camden. He eventually joined the industrious little group of pioneers of the city of Birmingham where he lived until his death in 1909.

Major Thomas Peters was in command of army transportation under General Richard Taylor. He had been appointed in 1861 by the governor of Tennessee as quartermaster of State troops. He was then assigned to the staff of General Polk until the assumption of the command of the army of Tennessee in 1864 by General Hood, when he was detailed to Selma. The major was a character of singular interest. He was the old Tennessee type, standing over six feet, lithe, erect, and vigorous, with an aquiline nose, high cheek bones, and jet-black hair. He looked for all the world like an Indian, it is said, and in fact, some fifteen years later, up in the Birmingham District, the major observed good-naturedly, when brought into a certain legal controversy over some government land business: "Why, men, here you are getting after me for taking up a little bit of a piece of government land — as everybody else is doing — when you stole the whole of it from my ancestors!"[1] And in truth there was Indian blood in his veins, and he was ever a wanderer and an enthusiast of the hills. Besides being a soldier, he had seen service as river man, cotton planter, railroad contractor, trader, prospector, and cotton broker. He was born in Wake County, North Carolina, in 1812, but was bred in middle Tennessee. During the eighteen-fifties he was taking contracts to build levees on the Mississippi River, and at the war's outbreak was engaged with Sam Tate in the construction of the Memphis and Charleston Railroad.

Being of an ever active and inquiring mind, he was led daily to the arsenal on matters relating to his station at Selma. For instance, the brand of pig iron sent down by Moses Stroup from the Oxmoor furnaces engaged his interest and he determined to follow up the source of these iron supplies, and get at least one look into the magic country that bore them. All this, however, is a story we shall come to by and by.

Another man identified with these times, although not stationed at Selma, was a young railroad man named Milton H. Smith.

[1] Great confusion regarding titles to the mineral lands of the South resulted from the fact that the Confederate Government claimed title to all mineral lands owned by the United States Government, and issued patents on same. This matter has not been fully cleared up until the present day. E. N. Cullom of Birmingham, Alabama.

"About the time of the battle of Shiloh," says Captain A. C. Danner of Mobile, "when Confederate troops were being hurried from Memphis to Corinth, mention was made around the camp fires of the excellent work a Mr. M. H. Smith was doing. He was handling, with a poor equipment, over the Memphis and Charleston Railroad, thousands of our soldiers with rapidity and safety. In this matter he did great service under many serious difficulties, for the Confederacy."

Mr. Smith is to-day president of the Louisville and Nashville railroad. He is a tall, broad-shouldered man, "regular Abe Lincoln build inside and out." In the early days of his career, as now, he had the reputation of being laconic, square-dealing, quick and keen with an energy and intensity almost savage. Like Albert Fink, he was a born railroad man, and he had been in the business from the first round of the ladder. Even in his position as yard-master at Chattanooga for the Memphis and Charleston Railroad, during the war, he had a grip on his lines such as no one else on the road had. He could shoulder big business even then, as his transportation of the Confederate regiments, at a crisis, proved.

As to his life, the details are brief. He was born in 1834 at Windom, Greene County, in western New York, on a farm within rifle shot of Lake Chautauqua. His people moved to Chicago and he received his schooling there, though he left school and began to shift for himself very early. His first job, like that of George B. McCormack, James W. McQueen, and Don Bacon, who are all men to be connected with these chronicles in the succeeding generation, was that of a telegraph operator, but before long he was beginning to railroad down in Mississippi on the old Mississippi Central. During the years from 1850 to the outbreak of the war, young Smith became familiar with railroad operations throughout Mississippi, Alabama, Georgia, and Tennessee. He knew all the big clan of fighters led by Jones, Pollard, Gilmer, and the rest, and he caught the game sense early. In addition to the problems he grappled with during the war, he adopted for the South some of the most advantageous points of the tariff made especially by the United States Government under Grant, for the United States military railroads. "It was the simplest tariff I ever had anything to do with," he observed. He eventually put into practice every important measure, and originated others, and made and worked the tariff between New York and New Orleans.

In each instance practicable he worked the tariff between two points only, made the list of articles with rate placed alongside, then adjusted these rates to those on steamship lines, with insurance added. This tariff system which he devised in antebellum days is still used by steamships plying between two points.

None of the very heavy ordnance manufactured at Selma was turned out at the arsenal; it came from the naval foundry. This was an altogether separate establishment of the Confederate Government and latterly under command of the Confederate navy department. Situated about one-half mile below the arsenal, and like it near the water line, it stood in a great square set about with brick buildings, including offices, gun foundry, machine shop, pattern shop, molding shop, rolling mill, melting furnace, three cupolas, puddling furnace, and blacksmith shop. The navy yard was one of the auxiliary departments of the foundry.[1] This big foundry, employing three thousand workmen by 1865, was the gradual outgrowth of a private enterprise started by Colin McRae. In 1861 a sight of the rich deposits of brown ore made accessible by the old Selma, Rome and Dalton Railroad, had inspired Mr. McRae to undertake the erection of a foundry for the casting of cannon of the heaviest caliber. Backed by the Confederate war department and under contract with the government the work progressed rapidly. President Davis later called upon Colin McRae to go abroad in connection with Confederate finances, and relieved him of his immense undertaking at Selma. His works were assumed jointly by the war and navy departments and Colonel Rains was made general superintendent. Later in 1863, it was agreed that the navy department should take sole charge, and in April of that year, Catesby ap R. Jones was ordered to command the naval foundry and to complete the armament of the ironclad *Tennessee* and the various gunboats then in construction.[2]

[1] J. J. Mitchell of Birmingham, Alabama.

[2] Hon. Joseph Forney Johnston, United States Senate: Description of Selma works in December, 1863, on file in the War Department, Washington, D. C., as follows: "The Foundry works at this place are next in capacity to the Tredegar works at Richmond. Cannon are cast and finished. Shot, shell, and other ammunition are manufactured in large quantities, and shipped to Atlanta, Mobile, and other points. The rolling mills are intended for manufacturing railroad iron, armor plates, etc. At the Navy Yard is being built a steamer two hundred and seventy feet long, forty-five feet wide, to be double plated with plates two inches thick, to be finished in February. At the arsenal are manufactured arms and ammunition of all kinds for shipment. Extensive repair shops are connected with the arsenal, large quantity of powder in magazine. At saddle and harness

Coming fresh from the battle line, from heroic and successful endeavor to save Richmond from the enemy's fleet, Commander Jones was greeted in Selma with enthusiasm. His record was known far and wide. To him assignment to the shops at Selma, which was far inland, when he longed so for sea duty and action at the front, meant irksome business. But having made such a first-class ironclad out of the famous old frigate *Merrimac* (using, by the way, Alabama iron from the Cane Creek Iron Works, in a portion of its construction), Commander Jones was now called to more work of the same caliber. The following letters bearing on his work at Selma have been received from Thomas M. Owen:

RICHMOND, Sept. 16th, 1864.

Comr. C. ap R. Jones, C. S. N.
Chf. of Ordnance Works,
Selma, Ala.

SIR:

Your letter of the 5 inst. has been received.

The services which you are rendering at Selma are regarded by this Department as more important to the Country than any which you could otherwise perform in the Navy, and not less valuable to its best interests than those which are being rendered by any other Naval officer.

You can be placed in the Provisional Navy at any time, and you were not so placed under the President's views of its organization, only because your services in your present sphere of duty were regarded by me as indispensable, and were you now withdrawn from it, I would find it extremely difficult to supply your place. I trust that the efficient discharge of the important duties devolved upon you, and which necessarily preclude you from Sea Service, will not be found to decrease your right to, and your chances of, advancement in a profession in which you are regarded as in all respects a most efficient officer.

Very Respty
Yr Ob Servt.
S. R. MALLORY,
Sec Navy.

shops are manufactured saddle harness, knapsacks, haversacks, canteens, etc. At wagon shops are manufactured eighteen wagons per week. There are also several foundries used by Government, and owned by citizens. Large quantities of commissary and quartermaster stores are received, stored, and shipped. There are from six thousand to seven thousand bales of cotton in store. Employed in the works are some eight hundred mechanics and detailed men and a large number of blacks. Military strength of post, one company of boys and exempts doing present duty, one hundred county militia (men over forty-five years of age, eleven able to do duty, never been drilled or seen service), and the mechanics and detailed men above mentioned, who are liable to serve in times of danger. Total, one thousand men. There are no forces other than militia nearer than Atlanta or Enterprise. December 3, 1863."

The following extract is taken from a letter headed, " Ordnance Office, War Department, Washington, D. C., Jany. 28, 1884," and was written by S. V. Benét, brigadier-general, and chief of ordnance, in reference to the ordnance books kept by Catesby ap R. Jones while in charge of the ordnance works at Selma:

" These documents have been examined carefully by the Board. They are very interesting and evince great care and ability in their preparation. The correspondence between officers of such scientific renown as Rains, Catesby ap R. Jones, Garesche, Brook, and Cuyler is of particular interest not only to the military man but to the general reader, as illustrative of the faithful and intelligent work of able men under adverse circumstances."

Among other Confederate naval officers associated with Catesby ap R. Jones at Selma were Commodore Farrand, Lieutenant Fairfax, and Lieutenant Reardon. To handle the operating end, Commander Jones obtained the services of George Peacock, the most expert foundryman then in the South.

Mr. Peacock had come to the United States from England in 1848 at the instance of the great Swedish engineer, John Ericsson, who later designed and built the famous little iron monster that grappled with Catesby ap R. Jones' *Merrimac.*

He was a Yorkshireman, born in 1823 at Stockton-on-Tees, the home town of Thomas Whitwell. As a boy young Peacock was bound out for seven years by regular indenture, to learn the business of founding in all of its branches. At length, starting out independently in Liverpool, he established a reputation when still a young man, and rose to such rank in the trade that he attracted an offer from Ericsson.

Once across in the States, however, George Peacock again struck out for himself. By 1852 he had become superintendent of Coller, Sage, and Durham's Cast Iron Pipe Works at West Troy, New York, with five hundred men under him. He then took charge of big undertakings at various points, manufacturing, for instance, all piping for the city water works at Cleveland, Ohio, and at Louisville. It was Peacock who introduced in America the casing flask for casting pipe on the end, a method which revolutionized the whole system of pipe making. He invented what is known as the drop pattern, adopted later in all machine molding. He originated too, the " green sand core bar," used in casting soil pipe, the first successful system for casting branches, curves, tees, and crooked connections of all kinds of pipes, the collapsible core bar, and numberless shop tools and labor

saving devices, together with machinery for farm, railroad, shop, and foundry. Besides being a foundryman so expert, Peacock was somewhat of a scientist and metallurgist. His aptitude for invention amounted almost to genius, and in foundry circles his name came in those days to lead the trade.

In 1861 George Peacock was employed as superintendent of C. B. Churchill and Company's foundry at Natchez, Mississippi. This firm followed McElwain's iron works at Holly Springs, in the manufacture of munitions of war for the Confederacy. While here Peacock invented an improved method for making shot and shell by which the molder turned out four times the number made by the method then everywhere in vogue, and with less percentage of imperfections. Directly after the fall of Corinth the firm moved to Columbiana, Shelby County, Alabama, though it was still under contract with the Confederate government, and George Peacock was sent there to construct the foundry, machine shop, and blacksmith shop and to superintend the work. George F. Peter, president of the Climax Coal Company at Maylene, Alabama, has obtained from Amos E. Lawrence, a molder in the Churchill foundry, the following notes:

"C. B. Churchill and Company made eight and ten pound shot and eight and ten pound shells, and possibly some thirty-two pound shells. They also made Parrott shells for Blakeley guns up to one hundred eighty pounds. In addition to this work for the Confederate government, they carried on a general foundry and machine business, making chilled rolls, furnace thimbles, pinions, and boxes. They also made bridge housings, railroad chair plates, and some fence work. A specimen of their iron fence work may be seen to-day around the Horace Ware lot in the Columbiana cemetery, about two hundred yards south of the old courthouse. They also did casting and machine work in brass. They employed about seventy-five men, and wages ranged from $1.50 per day for common labor to $6.00 per day for molders, all paid in Confederate money. Wilson burned and destroyed everything connected with this plant on his raid in 1865.

"A year or two later Hamilton Beggs built a small foundry on the site of the old plant and manufactured stoves for a few years. The iron used was hauled on wagons from the furnace at Shelby. C. B. Churchill with his family lived in the house now occupied by W. B. Browne, opposite the new courthouse. After Wilson's raid Mr. Browne moved to New Orleans, Captain Churchill moved to Plymouth, Massachusetts, and Beggs moved to Birmingham in 1879. The site of the foundry can now be located only by a pond of water and a pile of iron, formerly iron borings, but now run together into a mass of iron."

George Peacock built a beehive oven and made coke from coal he found on the Raglan estate in St. Clair County. The first coke making in Alabama was by William A. Goold, in 1855. Peacock's venture was the second. Both were for foundry use and not for furnace use, however.

It was while Peacock was constructing the works at Columbiana that Commander Jones, on the lookout for just such a practical and experienced man, endeavored to secure his services. But the Yorkshireman would not budge until, by special act of the Confederate congress, the office of superintendent of the naval foundry was created, with a salary double that of Commander Jones.[1] Having accepted the newly created position, the foundry did work during Jones' administration that astonished the world. Cannon and armor plate made of Alabama iron were turned out here. Practically every corps in the Confederate States army was supplied its big cannon from this foundry.

The great guns, from two to three feet in diameter through the breech, were from ten to eighteen feet long and "heavier than locomotives," McCollum says, "massive, tough, and indestructible." They were banded with wrought iron bands on the breech to keep from bursting. "The foundry at Selma," notes the historian Fleming, "was pronounced by experts to be the best in existence." An interesting fact to be noted here is that the pig iron used in the great gun making was mainly that sent by the Bibb furnace, while the old Shelby Iron Company and the Cane Creek iron works furnished the quality used in the armor plate for the rams and gunboats.

In pursuance of an order from the secretary of the navy, George Peacock made a chemical and mechanical examination of every brand of pig iron at the command of the Confederacy, in order to determine which might best serve for making naval guns. Peacock reported the Brierfield or Bibb furnace iron the stuff "for strength, malleability, fluxibility, and fine texture of fiber." It was on ground of his report that Brierfield was pressed into service and the rolling mill constructed. It was on this experiment that Peacock put into successful operation the reverberatory furnaces, melting iron by means of pine knots. "As high as fifty thousand pounds of iron was melted at one lighting and reduced to fluid in eight hours; at the same time the tensile strength of the metal being increased from thirty to forty per cent."

[1] William Wallace McCollum of Brierfield, Alabama.

Closely associated with Peacock in his experimental and practical work was Simon Gay, an expert gunmaker. Gay had learned his trade with T. S. Alvis at the Tredegar Iron Works in Virginia and had specialized on gun and cannon making. He was acting superintendent of the Bolona arsenal and cannon foundry in Chesterfield County, Virginia, just before coming to Selma. Both Gay and Peacock remained in Selma after the close of hostilities. Peacock started a foundry of his own in a spacious log house, the oldest building of Selma, where in 1825, Marquis de Lafayette had been entertained. Mining cars became one of his specialties. The "Peacock car wheel" became celebrated in the trade and his foundry grew in time to very fair proportions. The same business is being carried on to-day in Selma by George Peacock's sons.

The old Confederate navy yard, an auxiliary of the foundry, was located on a four-acre prairie lying low by the river. The buildings of rough timber consisted of offices, machines, and blacksmith shops, saw mill, and lumber yard. Here were constructed the battleships that met Farragut in Mobile Bay, August 5, 1864; the ironclad ram, *Tennessee,* and the gunboats, *Selma, Morgan,* and *Gaines.* Made of Alabama wood, the gunboats were thickly plated with wrought iron, covered with three layers of iron plate, each section two by six inches and bolted down with iron bolts. All were mounted with guns manufactured at the foundry, were charged with powder and ball and supplies from the arsenal, and were launched and let off down river to break the blockade in Mobile Bay.

The flagship *Tennessee* was Catesby ap R. Jones' pride. He constructed her machinery and battery. Her Shelby iron armor plate had no superior even in the Federal navy at that time. Regarding the subsequent test in battle when she was subjected to a cannonade of two hundred guns, Miller's history says, the *Tennessee* stood alone against seventeen Federal vessels. Her smokestack and steering gear were shot away, and when she surrendered she was being rammed on all sides by the prows of the Federal ships, but so perfect was her armor that it was not penetrated by a single shell.[1]

[1] An old copy of "Iron and Steel Association Bulletin," loaned by John E. Ware of Birmingham, contains this record:

"We recently asked the Shelby Iron Company to confirm the statements concerning the supplying of the armor plates for the *Tennessee* by the

Workshops, armories, mills, and depots of supplies operating in line with the arsenal and foundry were located in various

Shelby works, and in reply have received the following interesting letter from Mr. Witherby, assistant secretary of that company."

Extracts from letter:

"'When I came here, nearly twenty years ago, we had plates, merchant bars and strap rails on hand, made entirely of Shelby iron and rolled in this mill. Some of the plates, known to us now as 'gunboat iron,' are still in our storehouse, but they have been slowly disappearing under the demand of our blacksmiths for an 'extra good piece of iron,' for 'this job' or 'that particular place,' etc. Some of these plates are eight inches by three inches and others eleven inches by five inches, and of various lengths; originally they were, perhaps, ten feet long.

"'At the time of my arrival the wreck of the rolling mill had not been removed. The housings and rolls were in place just as they had been left, and so remained until they were sold to the Central iron works, at Helena, in this county, where they now are.

"'Shelby pig iron was also shipped to the Confederate arsenal and foundry at Selma, Alabama, in 1864, where the *Tennessee* was constructed and fitted out. This iron doubtless went into guns and other castings for this vessel. Catesby ap Jones was superintendent of the arsenal, and with his senior in rank, Franklin Buchanan, both pupils of that sea-god, Matthew Galbraith Perry, wrought out the *Tennessee*. They were as full of progressive ideas regarding steam and armor as their master, and nothing but the scanty means at their disposal prevented a much more formidable ironclad than the *Tennessee* from being set afloat.

"'Car wheel makers are now the exclusive users of our iron, and it will not be difficult for them to believe that the Shelby pig iron now made, if wrought into plate, would prove fully equal to anything tested in the past.

"'Very truly yours,

"'ED. T. WITHERBY,

"'*Assistant Secretary.*'

"Mr. Peacock, who had charge of the Confederate gun foundry at Selma, Alabama, in 1863 and 1864, informs Mr. Witherby that the armor used on the Confederate gunboats was in the shape of narrow thick strips, about two or three inches thick, and not more than twelve inches wide, usually about six inches wide.

"In Farragut's Life and Reports the *Tennessee* is described as follows: 'The ironclad steamer *Tennessee* was two hundred and nine feet in length and forty feet broad with projecting iron prow two feet below the water line. Her sloping sides were covered with an armor from five to six inches in thickness. She carried six Brooke's rifled cannon in casemate, two of which were pivot and the others broadside guns, throwing solid projectiles of one hundred and ten and ninety-five pounds respectively. Her steering gear was badly arranged and much exposed.' After the fight on August 5, 1864, Admiral Farragut reported it as 'one of the hardest earned victories of my life. I did not know how formidable the *Tennessee* was. Not a shot entered the vessel. We poured our [the *Hartford's*] whole broadside of nine-inch solid shot within ten feet of the casemate. Her smokestack shot away, her steering chains gone, she hoisted two white flags.'

"Admiral Porter, in his report of this fight, says that 'the hull of the *Tennessee* was virtually uninjured by the shots from the monitors. Only one fifteen-inch shot penetrated her armor, while the eleven-inch shot made no impression on her beyond shattering the port shutters, and had it not been for the carrying away of her exposed steering gear and smokestack Buchanan's calculations might have been verified.'

"The defences of Mobile Bay, at the time of the famous battle, consisted of two forts, a line of piles, and a double line of torpedoes, behind which lay the formidable ram *Tennessee* and three wooden gunboats. The attacking

other sections of Alabama besides Selma. There was a navy yard on the Tombigbee in Clarke County, near the Sunflower Bend, where several small boats were fashioned and gunboats in process of construction by 1865. Old Mt. Vernon arsenal, although dismantled, was still utilized as a depot for lumber. Here all the moss used for making saddle blankets was gathered and prepared. There were armories at Tallassee and Demopolis. At Montgomery there were numerous works of importance, and in charge of the Confederate rolling mill at this point was Richard Fell. Mr. Fell had been trained in the iron business at Wheeling, West Virginia. Before coming to Alabama he had been associated in the capacity of superintendent and manager with the Hillman brothers in Tennessee and Kentucky. After constructing several blast furnaces and rolling mills, he became identified with Horace Ware in the Shelby operations. He was then employed by the Confederate ordnance department to construct the celebrated Brierfield rolling mill. Practically the whole of his life was spent in the iron business in the South, for after the war he built rolling mills in Atlanta and Memphis, and superintended iron works at Chattanooga. A further venture in Alabama was his organization at Helena, in 1872, of the Central Iron Works or the Shelby Rolling Mill Company. Associated with him at this time were his son-in-law, R. W. Cobb, later governor of Alabama, B. B. Lewis, Richard Fell, Jr., and Charles Albert Fell.

At the same time that Richard Fell was in Montgomery, a certain sturdy young German, Christian F. Enslen, was working in one of the auxiliary departments of the Confederate government shops. As foreman of the smiths, he turned out from his department an immense amount of horseshoes for the cavalry brigades. His history is interesting. When barely fifteen he had left his native town of Würtemberg. Landing at New Orleans in 1845, he was swept into the tide of the Mexican War. He enlisted in the Alabama Rifles, young as he was, and saw more or less field service. When the war was over, he was mustered out in Montgomery and had to shift for himself. He took up the blacksmith's trade to start on, and built up at Wetumpka a fair-sized business, and married there. He enlisted in the Confederate

fleet consisted of seven sloops-of-war, including the flag-ship *Hartford*, six steamers, and four ironclad monitors. Each sloop had a gunboat lashed on the port side to take her through if her machinery should be disabled. One of the monitors was sunk by a torpedo early in the engagement."

Army at the first call for troops, but was assigned to the shops at Montgomery instead of to field service. Like John Veitch and Hamilton Beggs, he came up to early Birmingham, after the war, and set up shop and branched out in various lines. He railroaded a couple of years. He then went into the mercantile business on a big scale. In 1885 he organized, with a capital of $100,000, the Jefferson County Savings Bank, with his son, Eugene F. Enslen, in Birmingham. In 1909 he is the president of this bank, and owner of large properties and mineral lands in the Birmingham district.

Serving also at Montgomery during the war as post quartermaster, was John Mason Martin, whose father, Governor Martin, hailed from the old Cedar Creek district. At the outbreak of the war Captain Martin was practicing law in Tuskaloosa. Enlisting in the Fifth Alabama Infantry he was assigned to Montgomery. Here he found the quartermaster's department in chaos. He converted the State penitentiary into a manufactory of army supplies, and systemized the conduct of the whole department. In late years John Martin has represented the Sixth Congressional District in the United States Congress.

CHAPTER XI

COAL MINING IN CIVIL WAR PERIOD

Counties supplying coal to Confederate Government works. Captain John M. Huey agent at Selma. Cahaba field site of first underground mining. List of mines in operation during war. Important discoveries traced to old "bomb proofs." Work in Dailey Creek Basin. Early records of Piper and Coleanor. "Graveyards mark the Thompson Mines." Work of William Goold. Entrance of Joseph Squire. A remarkable biography. Coal discovered in Kansas and Nebraska by Joseph Squire and first mines opened there in eighteen-fifties. Mr. Squire's account of Old Montevallo mines. "It was not I who brought the capital into Alabama! I left that to Aldrich and DeBardeleben." Opening of Helena Coal mines for Red Mountain [Oxmoor] Company. Origin of various mines owned to-day by Tennessee Company, Little Cahaba Coal Company, Blocton-Cahaba Coal Company and others.

THE Alabama coal supply of the Confederate Government during the war period came in the main from six counties: Tuskaloosa, Jefferson, Walker, St. Clair, Bibb, and Shelby. Every train and barge load was concentrated at Selma and distributed from that station to Montgomery, Mobile, and other points. John M. Huey of Jonesboro, Jefferson County, was detailed with rank of captain as agent for the Confederate States navy to handle the coal and lumber end at Selma.

"The developments of war showed that in quality and mining conditions, the coal beds of Alabama are unsurpassed by any bituminous region on this continent," John T. Milner declared. Certainly the demand for coal as well as iron at this particular time was insatiate. Before the war no more than ten or eleven thousand tons of coal were mined per year in the entire State.

A great impetus was given to the mining of coal in the Cahaba field especially. Owing to the construction of the South and North Railroad into this field, its development preceded all others. "The first regular systematic underground mining in the State," says Joseph Squire, in his geological report of 1890, had been done in the Cahaba field, in 1856, "at a point in Shelby County, one mile west of the Montevallo Coal and Transportation Company's present slope." It was begun by private individuals

among whom were John M. Moore of Talladega, Judge Cooper of Lowndes, Dr. Miller of Wilcox, and P. M. Fancher of Bibb County. The Montevallo coal appears in the ascendancy at this period. The Brown mines and the Alabama Company mines were both located on the Montevallo seam. Three other well-known coal mines were the Goold and Woodson mines on the Cahaba River; the Helena mines of Monk, Edwards and Company, managed by William A. Goold, and several drifts below Helena, near Dailey Creek, termed "bomb proofs." In fact, there were scattered all over Bibb and Shelby counties various of these temporary drifts. The legislature had passed an act exempting any man from field service, who, with twenty slaves, signed contract to dig coal for the Confederate government. This started an exploration for coal all over the counties. "The remains of these bomb proofs still exist, and they have led to some exceedingly important discoveries in coal," says T. H. Aldrich of Birmingham.

Dailey Creek Basin was opened by refugees from Mississippi and elsewhere, among them being Brooks, Gainer, Rogers, Carter, Gholson, Herndon, and Thompson. Brooks and Gainer mined close to the present mines of the present day. All the coal from this basin was hauled in wagons to the nearest point on the Selma, Rome and Dalton Railroad, now the Southern, and shipped direct to Selma. "The seams worked," Mr. Squire states, "were the Clark seam, the Gholson seam, and the Thompson seam. The method of mining was by drift and horse power slopes. No steam power was used. The distance to the railroad by the wagon road was twelve miles. With a team of four mules and wagon they hauled one ton per day per each team. None of them advanced their mine workings very far from the outcrop, and all of these mines stopped when the war ended, the refugees, with one or two exceptions going back to their former homes."

Practically the entire basin became utterly abandoned and the mines were grown up with briers until late in the eighteen-eighties when Truman H. Aldrich and his associates revived the works and opened up the field to commerce and development. The Excelsior Coal Company, captained by T. H. Aldrich, sunk two slopes on the Gholson seam in January 1889. One of these was the Number One or Gurnee Slope, which was sunk over eight hundred feet. Railroads were built also in 1889 con-

necting the isolated region with Montevallo, Selma, Blocton, Bessemer, Birmingham, and with Helena, Montgomery, and points on the Gulf. By means of the steam colliers running between Pensacola and the West Indies, several of the coal markets of the Gulf of Mexico were eventually supplied by Mr. Aldrich with this "old original bomb-proof coal."

Concerning the Thompson mines, known to-day as Piper, and operated by the Little Cahaba Coal Company, and Coleanor, operated by the Blocton-Cahaba Coal Company, Frank Fitch of Bibb County furnishes the following particulars:

"W. H. Thompson, of Six Mile, Bibb County, Alabama, lived in the early eighteen-fifties in Hinds County, Mississippi. His father's name was N. H. Thompson. He and his brother Lewis were both planters and owned a large number of negroes. During the Civil War the enemy set their home on fire and burned four hundred bales of their cotton. They hurried away to Alabama and fled to the Cahaba hills. Lewis Thompson sent his son, Julius, and his overseer, with his able-bodied negroes to the Cahaba coal field in Bibb County, to mine coal for the Confederate government. They opened the Lower Thompson mine, later known as Piper Number Two. N. H. Thompson joined them, taking his family and slaves. He located near what has long been known as the Upper Thompson mine and now as Coleanor. The coal from each of these three mines was from the Thompson seam and was hauled by wagon to Ashby, a station on the Selma, Rome Road, and Dalton Railroad, a distance of eleven or twelve miles. No explosives were used there in mining coal, but the pick and bar did the work, and the cabs were hauled to the surface with mules. There was no pump to keep the mines dry, and the water was carried out in buckets, and consequently the men often worked with wet feet. It was a severe life for them for they had left their comfortable Mississippi plantations and were, at the mines, crowded into makeshift huts and shanties. All the comforts in health and in sickness of the good old plantation homes became but memories. Nothing was offered to alleviate the deprivations and suffering incident to the sudden, death-dealing change. Many died, and graveyards mark the Lower and Upper Thompson mines."

Chief among the early coal workers of this period who stayed permanently in the business were Joseph Squire and William A. Goold. They were both eventually connected with work throughout the Birmingham and Sheffield districts. On the field for over half a century these two "lone scouts" of the coal regions of Alabama figure, from time to time, all through this

narrative. They played the parts of miner, prospector, geologist, operator, and discoverer. There is no coal or iron man of Alabama to whom the names of Joseph Squire and Uncle Billy Goold are unknown. Both were indefatigable laborers and endured every hardship that coal men without capital, influence, or worldly wisdom encounter. Out in the field month after month, grubbing with tense eagerness for coal, these two small, slightly built, wiry men literally gave their lives to the cause. Both are to-day about eighty years of age, but they have clear, vivid memories, and an acquaintance with the facts of the coal business of the pioneer times that can be matched by no one.

"There were some days," says Mr. Squire, "in my examination of the Cahaba field when a human face was not visible to me from the rising to the setting of the sun. The only guide to my location was the lead of the creeks and branches, or my apparent distance from some mountain of known location."

Joseph Squire was the son of an English naval officer. He was born November 24, 1829, at Rochdale, Lancashire, England.

"My mother," says Mr. Squire, "was a daughter of Thomas Clegg, who was a lineal descendant of the Adam De Clegg recorded in the Doomsday Book as a Freeholder, living at Cleggswood, three miles northeast of the Old Cross in the center of Rochdale, in the year A. D. 1200. My mother was born in the old Half-acre Farm house, a few steps north of the Butterworth Farm house, one mile west of Rochdale Old Cross. My parents gave me about ten years' schooling in Rochdale, training which was preparatory to entering the Naval Academy. During this time I made my first geological map, showing all the coal fields in England. After my father's death mother opposed my going either to the Naval Academy or to sea. So I went to work in a coal pit that underlay the Newton Race Course. My knowledge of navigation helped me in making underground surveys, and I made every effort to learn to do any and all kinds of work done in the pit. At the age of seventeen I began to do a man's work at stripping and grinding the roller and flat cards and cylinders of the carding engines or machines in the factories of Lancashire. I saved up money to come to the United States and make a new start in life about the year 1849. I then served a year's apprenticeship to learn the machinist trade at the Peabody Furnace, at the top of Broad Street, Providence, Rhode Island. At the end of the year I went west to the region of country where Kansas and Nebraska now are. I found various tribes of Indians roaming about west of Independence, Leavenworth, and Council Bluffs. I then began to utilize my early geological training in tracing out the carboniferous formation

of that region. I opened mines for the supply of those frontier settlements, and, when near the river, for the supply of steamboats on the Missouri River. I opened some of them for myself, and some for others.

"In the spring of 1859 while in St. Louis, Missouri, I met with a company of Alabamians. They informed me that there were beds of coal in Alabama of good quality, but stated that the efforts to mine it failed to profit them very largely. They gave me the address of some of the interested parties, and I removed to the Montevallo mines in the fall of 1859. At that time the mines were about one and one-fourth miles southwest of the present Aldrich mines at Aldrich, Shelby County, Alabama. I will never forget that time! I had on the best coat of broadcloth that I dare say was ever brought into Alabama! 'T was the coat got me by my first good partners! But I had only two dollars and a half in my pocket! A man with that much has got to be shifty, you know. But, make no mistake; it was not I who brought the capital into Alabama! No, it was not I! I left that to Aldrich and DeBardeleben."

Mr. Squire has prepared the following account of early coal mining in Alabama:

"The mines of the Alabama Coal Mining Company had stopped work and every white miner at the Montevallo mines was awaiting the first steam engine (for hoisting coal) and a pair of thirty-inch cylinder boilers to come from Wilkesbarre, Pennsylvania. This was the first steam engine for hoisting coal from a slope or pit that was ever brought to Alabama. The slope intended for the new hoisting engine was sunk in the shaft seam in the overturned measures, at a point on the Range line between Range 11 and Range 12, East, Township 24. The slope had a rate of dip of 65 to 70 degrees from the horizontal, and was sunk down to a depth of about one hundred sixty feet. The gangways were started off, but not opened up more than each one about fifty feet from the slope, when I got to the mines in 1859.

"William Goold and Jasper N. Campbell had both been at work at the Montevallo mines prior to my arrival. Mr. Goold was then mining coal in a drift mine in St. Clair County, and shipping his coal by flatboat down the Coosa River to Montgomery. Jasper N. Campbell had charge of the Browne and Phil Weaver mine and the Fancher's pit (all drifts in the Montevallo seam) before I arrived at the Montevallo mines.

"The Fancher or Woods pits or drifts were then abandoned for the new Irish pit drift. The mining property at the Montevallo mines in 1859 was chiefly owned by the Alabama Coal Mining Company. Colonel John S. Storrs of Montevallo was president of the company. The owners of the adjoining or

eastern part of the Montevallo mines were William P. Browne, in partnership with Phil Weaver, a capitalist of Selma, and the Shelby Iron Company, which latter then owned eighty acres north of the Dutch pit and Irish pit.

"A list of the coal mines that had been worked or started in that locality in 1859 includes the Arcade pit, advanced just a few yards from daylight; the Brown pit, at a point near the site of the Aldrich old slope; the Irish pit, the Dutch pit, the Whim pit, the Wood pit. These places had been opened on the outcrop of the Montevallo seam, some of them being driven in only a few yards from daylight, when they were abandoned.

"The above were all of the openings in the Montevallo seam and basin. Several openings had been made in the seams of the overturned measures previous to 1859. The most important of these was made in the Shaft seam, a slope driven down about a hundred and sixty feet, at an angle of 65 to 70 degrees. The shaft was full of water, and a tram road had been graded from said slope to the 'chute' at the end of the three-mile branch railroad with strap iron and wood stringer track, where the old log office and store then stood. On little Mayberry Creek, at the intersection of the seam of the overturned measures, a drift opening had been made in the Dodd seam, also a drift in the Cooper seam, and a test slope had been made or sunk in the Cannel seam. But all of the openings described in both the Montevallo seam and the seams of the overturned measures were lying idle. Not a miner or hand of any kind was at work at any of them. The scene was a picture of desolation such as I had never seen before. The miners seemed to be building their hopes on the hoisting steam engine and boilers coming from Pennsylvania as a means of lessening the labor and increasing the facilities for mining and getting out coal. The only improvement intended was lessening the underground haulage expenses, that being borne by the mine owner before the engine arrived. I saw the matter from a different standpoint, for I was born within sound of the pit sheaves of the Walmesley pit and the rattle of the pulleys on a half-mile track. This took the coal trams inside of city limits and there delivered the coal to the street carts and wagons for distribution in old Rochdale. This same method seemed practicable for Montevallo. I went to see the president of the Alabama Coal Mining Company, Colonel John S. Storrs. I asked him if he had sale for coal, if it was got out. He answered yes. I then asked him what it had been costing the company to mine it. He told me ten dollars per ton. I told him I could mine it and put it on the railroad cars for him, all lump, free from slack, at one fourth of that price, though I would require an advance of three hundred dollars per month for the first three months. With that understanding I leased the coal on the east side of the Irish pit entrance at $2.17½ per ton of two thousand pounds placed on the railroad cars all lump. Out of

the Irish pit I received $2.12½ per ton of two thousand pounds delivered on railroad cars all lump.

"I found it very difficult to commence mining operations without capital, so I took two expert miners in partnership with me, Alexander Anderson and John Whitehead. We finished the contract and lease some time in 1860, and I was glad to bring it to a close, for the superintendent began to put obstacles in our way, for he evidently looked on our low cost coal as an evidence against his method of mining. He could not say cheaper labor for I raised the price of mining that coal the day I commenced to about a dollar per ton of two thousand pounds. I settled up with the company. In February, 1861, I contracted with Mr. William P. Browne to sink a slope in the Montevallo seam, one hundred feet down the dip of the coal. This slope was the second slope sunk for steam hoisting purposes in Alabama.

"In March, 1862, I entered into a written contract with Colonel John S. Storrs, president of the Alabama Coal Mining Company, to take charge of and superintend their mines for twelve months. In that same year, 1862, the board of directors of the company had a meeting in Selma, and I was called on to take my map of the mines and region around there, down to them and explain the condition of the property and underground workings. It was at this meeting, I was ordered by the company to meet Mr. William Gilmer, president of the Red Mountain Company, and advise him as to the best course to pursue with regard to the mine openings on the Helena and Conglomerate seam (now owned by the Tennessee Company). I advised him to pull up stakes and commence again on the same seams, a mile or two north of the Beaver Dam Creek, which he did. My responsibility now became largely increased. I had to take charge of three miles of strap iron with wood stringer railroad; had to superintend and manage the workings of the Irish pit with its extensive underground workings, and keep the advance of the gangways and rooms measured up and mapped out by scale every month for the satisfaction of the stockholders whenever they chose to call or had a stockholders' meeting. I had to keep the shaft seam slope workings measured and mapped out by scale every month end, the same as the Montevallo seam workings. And also had to attend to the store twice a week.

"When I took charge of the mines Colonel Storrs informed me that the opening of the shaft seam slope had run the company in debt $14,000. I told him that I did n't expect to be able to make more out of the shaft slope than the indebtedness. (This, Colonel Storrs told me just before he died, in 1863, was about paid up.) I soon discovered that the 'bottom slate' was the roof, and that the seam was subject to thin places. After the death of Colonel Storrs, General Cornelius Robinson became president of the company. He was succeeded by John R. Kenan. T. J. Portis of Dallas County, George M. Figh of Montgomery, Benja-

min B. Davis of Montgomery, and the Rev. I. T. Tichenor bought a controlling interest in the mines, and changed the name from Alabama Coal Mining Company to the Montevallo Coal Mining Company. Captain Portis was appointed president, M. Figh general superintendent, and Mr. Davis secretary and bookkeeper. I was appointed mining engineer for the company to do all their surveying underground and over, and plan out extension of the workings to increase the output."

During the entire war period Joseph Squire thus mined coal for the Confederate Government. In later years he became closely associated with Aldrich and DeBardeleben in the exploration of the Birmingham district and he has contributed very important information to the State Geological Survey.

CHAPTER XII

IRON MAKING IN WAR PERIOD

Summary of iron making counties. Miraculous growth of industrial plants all over State. Hale and Murdock Furnace records of Lamar County continued. Enterprises in Tuskaloosa County. Improvments made at Old Tannehill. Thomas Hennington Owen builds forge on Roupes Creek. Present day appearance of Tannehill ruins and surrounding country. Records of Jefferson County. Operation of Oxmoor furnaces. Introduction of Daniel Pratt. Establishment of Mt. Pinson Iron Works and Irondale plant. Biographical sketch of W. S. McElwain. His association with iron making in Mississippi. A return to Oxmoor. Heroism of old Moses Stroup. Bibb County operations. Construction of Brierfield furnace. Biographical sketch of Caswell Campbell Huckabee. Reminiscences of S. G. Wilson. Introduction of Alexander Knowles Shepard. Incident of Tom L. Johnson's boyhood. Purchase of Colonel Huckabee's plant by Confederate Government. Estimate of Brierfield iron in George Peacock's report. S. G. Wilson builds forge on Six Mile Creek. Introduction of Giles Edwards. Association with early iron making in Wales, Pennsylvania, and in Tennessee. The most important event in the life of "Captain" Bill Jones of Carnegie Company. Reconstruction of Shelby plant by Edwards. Mention of Hamilton T. Beggs.

THERE were, as has been specified, six counties furnishing coal to the Confederate Government. This group, with the exception of Walker and St. Clair, also furnished pig iron. Thus the iron making counties at this period were nine, all told: Lamar, Tuskaloosa, Jefferson, Bibb, Shelby, Talladega, Calhoun, Jackson, and Cherokee.

Late in the eighteen-fifties, and, indeed, quite up to the outbreak of the war, there were in the State but few blast furnaces and one rolling mill in operation. The precise number of forges at work in 1860 cannot be determined, however, for many, thus far mentioned, faded gradually, like the Cedar Creek furnace, from the commercial sphere, before this decade. Now came new zest. Based upon the map and the geological facts set forth by Michael Tuomey, new blast furnaces, rolling mills, foundries, forges, and shops were planted. They sprang up, as it seemed, almost in a night. Existing old plants, whose records have already been detailed, were improved, and in some instances enlarged to double their former capacity.

The Hale and Murdock Iron Works in Lamar County at once entered into contract with the Confederate Government. M. A. Hale of Georgia, says:

"In 1862 the erection of the new furnace began and the next year it was put in blast. The Confederate government took the larger part of its output, using the pig iron for making cannon, hollow ware, skillets, ovens, and pots for the soldiers' camp. These castings were made by dipping the molten iron direct from the furnace and pouring it into molds without remelting the pigs in a cupola. All products not sold to the Government were bartered or exchanged for country produce, antebellum prices governing the exchange. A large part of the labor used was slave labor. Many of the negroes were purchased by the owner at the time the furnace was built, and afterwards. The skilled labor, machinists, etc., were detailed for duty by the Confederate government. As it was much safer than being at the front, there were always many applications for the places."

According to Walter Nesmith of Vernon, Alabama, "This furnace contributed a good deal of material to the Confederate cause. It molded cannon balls, grape shot, and such like, which were used by the Confederate army. I might mention incidentally that the entire cavalry under General Forrest had their horses shot at this place when they made the tour through Mississippi to Corinth, during the year 1862–63. Now there is nothing left of the furnace except the slag and dross. An attempt was made to move the old boiler once. It was hauled about one half a mile, and lies along the public road as a monument of the old Hale and Murdock Company."

The furnace is occasionally mentioned as the Old Winston furnace, and in some records as the Weston furnace, having been built by a furnaceman named Joseph Weston, employed by Hale and Murdock.

According to Thomas P. Clinton, the Leach and Avery foundry, in Tuskaloosa County, near the town of Tuskaloosa, started business in the eighteen-forties, and during the Civil War cast a considerable amount of cannon for the Confederacy.

The old Tannehill furnace was bought in 1863 by William L. Saunders and Company, of Marion, Alabama. A steam engine was installed and another furnace added to the plant. On the same creek, precisely one mile south of Tannehill, a forge was put up by Thomas Hennington Owen, and Thomas Lightfoot Williams. "Over and again, so Rose Owen tells me, they had to get out their ore in the morning, and besides making the iron

for the government, they had to make the nails and horseshoes, shoe all their mules, and get the teams off to the railroad at Montevallo, before night." [1] Mr. Williams also ran a big tan yard at Tannehill, and made saddles and harness for the Confederacy. The forge, being out of the way, escaped the enemy's eye, but was destroyed in the June freshet of 1866. Mr. Owen was not an iron worker himself, but a planter and merchant of Jefferson County, and served in the latter eighteen-seventies as county commissioner. He employed an expert iron worker from Tennessee, Thomas C. Bratton, to build and operate the forge.

All during the war Tannehill furnace was operated, making cannon balls, gun barrels, ordnance, all the munitions of war, in addition to pots, pans, and skillets, for the use of the Confederate army. When Croxton's detachment came through Roupes Valley they happened upon Tannehill at the very moment when the cupola was being tapped and they made short work of it. They demolished one furnace entirely, blew up the trestle, tore up the tramway, burned the foundry and cast houses, and passed on to the settlement beyond, which they razed to the ground.

This was the death blow. The Tannehill furnaces were put out of blast for good and all; the whole country round about was abandoned and the forest left to its own. And the forest took! It is wild almost as a virgin wilderness to-day down there. The old Mansion House, a short distance from the furnace, where Giles Edwards afterwards lived, is gone to rack and ruin. A few heaps of stone mark the site of the forsaken homes. The ruins of the furnace like some Welsh medieval tower stand forlorn, yet will they stand for centuries to come as a memorial to the early iron-masters of Alabama, as the mute historian of the first generation of the iron industry in this State. To-day there are but few men living who used to work about Tannehill. One is the old darkey, Bob Fuller, who sits around the Goethite commissary and tells how iron is made. There is no written record of any of the facts about Tannehill, and no mention whatever is made of this important group of furnaces in the standard authorities on iron making in Alabama. The Station Tannehill is the getting-off place for the Goethite miners now — nothing else. No hint or suggestion of the old furnaces, or of the early Tannehill settlement, can be seen from the railroad which cuts through the wild country there.

[1] James M. Gillespy of Birmingham.

At the station are three section houses, a few dilapidated shacks, and a dirt road — the Old Furnace road — and the dingy, old Tannehill House, in forlorn silhouette, high on the western hill. The old house is as shabby and ragged looking as a beggar; wizened, tottering, held up apparently only by its stout old chimneys builded out of English brick, by Colonel Tannehill, long ago. Gray as a shadow it is, gloomy as a fragment of rain cloud flung sudden and sharp against clean sky. And yonder, all back from the old house, back over the hills, screened by the high woods and the fresh springing green where once the cotton grew, are the vast brown ore mines of the Tennessee and Republic companies.

"Millions and millions of dollars are in those hills," the iron men say; "and where the ground could be bought for a dollar an acre a few years ago, thousands of dollars can't get it now." Straight across big country to the coal fields they go; Goethite, Rickey, Standiford, ghostly Martaband, and Giles. The old pits and strippings of the early workers are to be seen to-day this side of the modern Goethite group.

To trace the old ways through the woods and fields is almost as thrilling as to blaze the way into the new! The roadbed of the old tramway from the mines to the furnaces runs east a little by south, crosses the railroad track, and gets lost a space in the fields. Just over the yellow stream, formerly Roupes Creek, then Mill Creek, and now Mud Creek, it mounts again. It is rather like a corduroy road through Maine forests. However, rough going as it is, it runs through as fair a country as the heart desires. The boughs of the trees dip low over the way, arching it all in green — those sweet, long, green ways! The old tramway follows rising ground and then quite suddenly, on the very crest of a sandstone ridge, it halts, and right below, like some castled fortress in Arthurian legend, all overwrought with briers and lacing vines and ferns, and locked by the everlasting pines, are the old stone furnaces builded by Moses Stroup. They are held in a hollow of Red Mountain, just where the giant range of the red hematite bends to the fields of his brown brother, on the marge of the Black Warrior's domains. Sunlight and shadows play hide and seek. The leaves are thick. The openings into the crucibles are arches, cathedral-like, pure gothic in form, full of grace and dark with mystery. A tall sycamore leans its white branches over the ruined stones. A pine tree, thirty feet

in height, springs from the mossy top where is a very jungle of weeds and wild flowers, all growing forty feet mid-air! Sumac, sweet gum, and the wild muscadine creep close in from the stream that drove the great wheels of Tannehill years ago. And all around and about are fragments of old iron, pieces of broken gearing, blast engines, wheels, and air pipes. This machinery is all heavy, hand made and hand forged. Some of the pieces of the slag lying about are shiny and black as ebony. The old fly wheel is imbedded in the earth. The fallen stones are moss-covered. The place, from the look of it, might be centuries old. It is the romance of the iron-masters, and stirs one like a vision of old Britain time.

It is in the war period that the county of Jefferson, to-day the banner county of Alabama, site of the city of Birmingham, and center of the coal and iron industry of the South, swings for the first time into the circle of the iron making counties. Because it is the most important county in this history, it will be presented in some detail. Three crude iron making ventures were started early in the eighteen-sixties, the Red Mountain Iron Company Works (or the Oxmoor furnaces), owned at the present time by the Tennessee Coal, Iron and Railroad Company; the Mt. Pinson Iron Works, and the Cahaba Iron Works in Shades Valley, near Irondale.

Notwithstanding the mineral riches stored so deep in the hold of the Jones Valley region, none of the big realities of the place were brought to light until this war period; and then they were but mere forecast. With the exception of Baylis Grace's experiment and the futile efforts of early smiths to reduce Red Mountain ores, the mighty ridge of ore lay untouched, being considered "good to dye breeches, not to make iron."

Now with Frank Gilmer's prospective railroad assured, the opening up of the Red Mountain country was a foregone conclusion. Moreover, included in the railroad business was the construction of a blast furnace. Colonel Gilmer selected a site in Shades Valley at the foot of Shades Mountain, closely bordering the railroad, and but two or three miles from Graces Gap, the place later named Oxmoor. Finding government aid was necessary, Colonel Gilmer and John T. Milner then went up to Richmond. They saw Secretary of War Seddon and succeeded in getting a contract drawn up with the Confederate Government

" to build a railroad to Red Mountain and to erect there furnaces and rolling mills." [1] Thus the initial iron making enterprise of Jefferson County was practically a war measure. Colonel Gilmer and John T. Milner organized the Red Mountain Iron and Coal Company on their return, and Frank Gilmer's brother, William B. Gilmer, was elected president. The shareholders of both the railroad and this furnace company comprised some twenty-five planters and business men of Alabama and Mississippi, among whom, besides members of the Gilmer and Noble families of Montgomery, were B. S. Bibb, T. L. Mount, M. E. Pratt, and Daniel Pratt.

Daniel Pratt and Horace Ware, whose property was then valued at a quarter of a million dollars, were the most successful manufacturers of Alabama, at that period. Mr. Pratt had then been living in the State nearly thirty years, and had built up the most extensive cotton gin plant in the South, had founded the town of Prattville, and had made a fortune and a reputation for solid worth, dignity, practical sense, foresight, and integrity. Like Horace Ware, he was of New England. He was born July 26, 1799, on a small farm in Temple, New Hampshire, and reared in the Puritan rigors. After a short term at school, the boy was apprenticed, at sixteen, to a carpenter. At twenty he set out for the South to make his own way, and landed in Savannah with nothing beyond his trade, his chest of tools, and his New England conscience.

Training had bred in him the certain excellencies of order, system, thoroughness, and prompt, square dealing. He worked from dawn till dark, following his trade in various localities in Georgia until 1833. Shortly after his marriage to Esther Ticknor, also of New England, he decided to start the manufacture of cotton gins in Alabama. He purchased materials and two negroes and set out with his wife and the wagon outfit for the piney woods of the newer country. He camped in Elmore County, not many miles from old Ft. Jackson (old Ft. Toulouse), and here he built a smithy and gin shop, and started his first cotton gins.

After a venture or two in which he prospered, the New England workman selected, in 1838, a permanent site for his mills and factories down in the piney woods and marshes of Autauga County, " not so much for its beauty," S. Mims says, " as for its pine timber."

[1] Milner's Address to Georgia Society.

Daniel Pratt's specific object was " to build a village dignifying labor in the South, and to give the laboring class not only an opportunity to make independent living, but to train up workmen who could give dignity to labor, and add to results an asset of the whole State." He soon transformed Autauga County. A negro boy of his used to say, " Marse Dan'l, he ain't no ways satisfied with de way de Lawd done made the earth. But he always digging down the hills and filling up de hollows, dat 's all I knows."

His town became the county seat. Pratt himself served in both branches of the State legislature, and came to hold high rank in the Masonic Order. He opposed secession, but when the State went with the tide, he counseled wisdom and prudence and preparation for the worst; he urged the building of arsenals and powder manufactures, the establishment of a navy, and the construction of railroads.

From the time he started his gin business he bought homemade iron, and was the first large patron of the pioneer iron makers. Horace Ware always said Mr. Pratt was his best customer, " and always paid his debts." Everything Pratt used was first-class make. He let his timber season, he sent to England for Sheffield steel, and he got the bulk of his iron from the Shelby Iron Works. He talked and wrote about things of commercial value to the State. He did not acquire majority control of the Oxmoor property until 1872, but as a director of the South and North Railroad, Mr. Pratt was, as previously noted, actively interested in the organization of the Red Mountain Iron and Coal Company, which constructed the original plant.[1]

The management of this company engaged the most expert furnaceman then in Alabama, to build the furnaces and to act as superintendent. This was Moses Stroup, whose career, as builder of Round Mountain and of Tannehill furnaces, has already been alluded to, and who was, with his father, the pioneer iron maker and furnace builder of Georgia and the Carolinas. The same massive and robust construction used at Tannehill was employed at Oxmoor. The stacks were indeed twin mates to the Tannehill group.

Shortly after Moses Stroup had started work, another iron making enterprise, the Mt. Pinson Iron Works, was set on foot

[1] Data given by Colonel H. F. DeBardeleben of Alabama, son-in-law of Daniel Pratt.

in Jefferson County, on a crude scale. A man named McGee, a refugee from Tennessee, came into Alabama with several slaves who were all trained smiths. Selecting a point on Turkey Creek, near Hanby's mill, a short distance from the Mt. Pinson road, McGee put up his little water blast forge, smith, and foundry, in 1862. His notion, like C. C. Huckabee's, down at Brierfield, was not to feed the Confederate arsenal, but to take care of the farmers, who were beginning to suffer for lack of tools. As a matter of fact, too, the field now held out fair financial inducements. As it turned out, however, McGee had to shoe so many horses for the Confederate army that there was little time left for any tool making, and the Mt. Pinson Iron Works proved little more than a blacksmith shop.

In the winter of 1863 the "Old Roman" furnaces at Oxmoor went into blast, each making ten tons of charcoal iron per day. At the same time Frank Gilmer opened the Helena coal mines. Milner says: "He sent thousands of tons of coal all over the South, and thousands of tons of Red Mountain pig iron were shot away in shot and shell at Charleston and Mobile." The entire output of the furnaces, "charcoal iron No. 1," was hauled to Selma by one little locomotive, "Willis J. Milner," a little, broad gauge wood-burner, named for John T. Milner's father. The old South and North Railroad, boosted along by the Confederate government, was a patchwork line, "every sort and kind of rail from 60 pounds T to 30 pounds T and strap rail and stringer!" The old railroad men of the State grin broadly to-day, whenever they refer "to the old original line of the Louisville and Nashville in Alabama." None the less it handled a vast amount of freight from 1863 to 1865.

Early in 1863 a nephew of old Daniel Hillman, Levin S. Goodrich, visited Oxmoor with a letter addressed to "William B. Gilmer, president of the Red Mountain Iron and Coal Company, or to iron-masters of the Confederate States, generally." Negotiations were then pending between the company and the Confederate Government for the furnishing of a quality of iron adapted for the making of Parrott rifles, shot and shell. It was this Mr. Goodrich who eventually (1876) made Oxmoor famous as the first coke furnace.

A few months after the Oxmoor furnaces went into blast an iron-master from Holly Springs, Mississippi, W. S. McElwain, took up an option on eight hundred acres of land in Shades Valley.

It was an out-of-the-way location, being a few miles northeast of Oxmoor, and a quarter of a mile in the woods, off the stage road from Nashville to Montgomery, which was known as the Montevallo Road, and seemed to be remote from the possibility of Federal attack. In 1864, McElwain, backed by W. A. Jones, put up a stone stack, using Shades Creek for water power. He named the furnace and the few shacks Cahaba Iron Works, but the folk in the neighborhood always called the place Irondale.

McElwain, like Daniel Pratt, Harrison Hale, Horace Ware, and several other iron-masters of this period, was a New England man. He was born at Pittsfield, Massachusetts, in 1832, and was brought up to the machinist trade. After a term of service in a gun factory in New York and in a foundry and machine shop at Sandusky, Ohio, the young man was urged to come South, through his uncle, Walter L. Goodman. Goodman was in charge of the construction work of the Mississippi Central Railroad, now a part of the Illinois Central system. At Holly Springs Mr. McElwain induced W. A. P. Jones and Captain E. G. Barney, superintendent of the Mississippi Central, to join him in the foundry business, though all that McElwain had for capital was his New England ingenuity and his brains. Captain Barney put into the concern an old locomotive boiler that he fished out of the Tallahatchie River, and Mr. Jones furnished the lumber. McElwain fashioned a cupola out of the shell of the old boiler and a shed out of the timber, and began operations.

Goodman threw work his nephew's way and it was not long before McElwain had a pattern shop, foundry, and blacksmith's shop. Within eighteen months from the time they started, the business had attained such proportions that they felt warranted in making a bid for building the iron works of the Moresque building, in New Orleans. They received the contract over competitors from Philadelphia, Pittsburg, Cincinnati, and New Orleans. After receiving this contract they made other contracts in Mississippi and New Orleans. In the fall of 1860 J. H. Athey, formerly of Louisville, Kentucky, entered the firm, buying half of W. A. P. Jones' interest. The firm's name, however, remained the same, the parties being Jones, McElwain, Anthey, Barney, and Merrill. The contract work occupied all the time of the foundry until the spring of 1861, when the working force often reached two hundred men, with an all night force in addition.

In 1861 when they were winding up their contracts they re-

ceived proposals from the Confederate Government to turn their foundry into an armory for making small arms and cannons for the Confederate Government. They accepted the offer, $60,000 in Confederate money, advanced by the government. At that time everything wore a war-like aspect, but nothing stopped the work on the armory. Building material was ordered and an additional building, two hundred feet long, fifty feet wide, and two stories high, was constructed as well as a huge blacksmith shop with thirty forges, trip hammer, and rolls for the manufacture of gun barrels. Knowing that it would be useless to attempt to get gun machinery from Europe, McElwain and Merrill built their own machinery. They worked out all the patterns at home at night, and sent them to different foundries in the State to have them turned into machinery. The first gun for the Confederate service is said to have been made by McElwain and Merrill at Holly Springs. It had a rifled barrel, and during the war was struck with a ball, returned then to McElwain, and bored for a shot gun.[1]

The first cannon of the Confederacy were also turned out here at Holly Springs armory by McElwain and Merrill. They were made of brass, and McElwain's widow relates how, in the making of these first guns, she, too, used to lend a hand, pouring out the ladles of metal into the mold. The cannon and some of the small arms manufactured here were used at the battle of Shiloh in April, 1862. At that time the armory, with a working force of four to six hundred men and boys, was turning out twenty-five stands of arms per day and some ordnances, cannon balls, and shells. After the battle of Shiloh, the Confederate forces fell back to Tupelo, Mississippi, leaving Holly Springs practically in the Federal lines.

Prior to this time General Gorgas and the secretary of war, hearing of the valuable machinery that Jones and McElwain Company had, made several ineffective overtures to them to purchase it in order to concentrate it all at Macon, Georgia, where they had a large ordnance works. "After the battle of Shiloh," Merrill relates, "seeing that the Confederate government would give us no transportation for the machinery out of the Federal lines, we sent our agent to Richmond to know what the government would give us for our machinery and stock. They

[1] This relic is to-day the property of McElwain's daughter, Mrs. H. J. Miller of Highland Park, Chattanooga, and is treasured as a family heirloom.

agreed to give the actual cost of the machinery and stock with any advance that might have occurred since we bought it." The sale was eventually made at a sacrifice. Some of the machinery was moved to Macon, Georgia, and every vestige of the Holly Springs works was destroyed by the Federal soldiers in a night raid, just after the evacuation of Corinth. McElwain, as related, then set up in Jefferson County, Alabama. He built a house near what is now Gate City, and a tram track from his red ore mine, the Helen Bess, opposite Woodlawn, over to his furnace, in Shades Valley. The new plant turned out ten tons per day of charcoal pig iron, all of which was shipped to Selma.

The Oxmoor plant, under Moses Stroup's practical hand, kept up steadily its twenty tons per day. Mary Gordon Duffee writes:

"The furnaces gave employment to a large amount of skilled labor, and created quite a settlement of worthy people. . . . The surrounding country then partook much of the characteristics of a wilderness and was sparsely settled, since the mineral interests were up to that period deemed worthless, the present effort at manufacture an experiment, and agriculture the sole calling of the people of the valley. The unfinished condition of the South and North Railroad rendered the proper construction of these furnaces a herculean undertaking, and no individual or corporate company would have dared such an effort without government aid. The picturesque beauty of the location was even more striking then than now. The sides of the hills were covered with luxuriant growth of native forest. The waters of the creek wound in silence around the mountain's base. A street climbed the sloping ascent, and the cottages of several families made the scene almost homelike. Success soon crowned their efforts and the works began to yield practical results while the storm of war beat so loud and fierce without. Confidence in the ability of the army of Tennessee to keep the foe in front and with no thought of the desperate strategic movement in its rear which was aimed at the heart of the South kept the work going from day to day. The fertile farms of the valley, till then unshorn by war's invasion, furnished an abundance of food."

During the period from 1863 to 1865, however, the press of work on all the furnacemen and artisans became a thing unutterable, and was as hard and relentless as service under Forrest himself.

Although Moses Stroup was nearly seventy years of age by this time, he toiled night and day. There was a singular reserve about this old furnaceman and a deep kindliness of nature and manner.

He had an affection for his home and his children somewhat out of common. Although he married late in life he had six children, three boys and three girls, whose mother died when they were all quite young. His boys all went off to the wars. The oldest boy, Alonzo Stroup, enlisted in a North Carolina regiment; Henry, the second boy, joined a North Alabama regiment; and little Andrew Moses, no more than sixteen years old, and the youngest of the family, entered a boy company mustered in in Jefferson County. No sooner had the Oxmoor furnaces gone into blast than Moses Stroup got word that Henry had been killed on the firing line up in Virginia. Then, without warning, the body of little Andrew was brought home to his father. The boy had fallen under the camp rigors at Selma, just as his company was making ready for the front. They buried the child in the old Elyton cemetery. No sooner was his grave covered than Moses Stroup got the message that the oldest boy had been shot to death just as Henry had been, somewhere in the marches north.

During those hard pressed years several of the blast furnaces in other counties flickered, and some went out; but the Oxmoor furnaces kept up to the mark, steady and true, and everyone knew it was because "Old Man Stroup was on the job." But a day came when the work was wrested even from Moses Stroup. He saw the destruction of Oxmoor and heard of that at Tannehill and in the other States. All of his handiwork thus was gone, out of sight and usefulness, it seemed to him forever. Yet, they say, that when the guns had ceased firing, old as he then was, he was ready to begin again, though there was nothing for him to begin with. His daughters gathered to him, and with them and their children he spent his closing years, dying near Montevallo, in 1877.

From Richard S. Hickman of Ensley, Alabama, a relative who is devoted to the old man's memory, a portrait of Moses Stroup has been received. It is a face that speaks. It shows how at the last he came to be the master of his days, and how grief opened to him the house of truth. As one looks upon this picture, the old furnaceman — the great stoic — can be seen very plainly, sitting at his daughter's cottage door in the evening, patiently and quietly, leaning on his stick, and looking out with far-seeing eyes upon the west, just as, indeed, centuries before him, the honored old men of the Indian tribes of Alabama ever watched the going down of the sun with eyes of the deep seer and with the philosophic mind.

The haunting sense of something strange, and big, and wide, and very sad, and far away is always called up to the mind by the history of Oxmoor, and, indeed, by the very look of the place to-day. Standing upon the rock where the English pilgrims carved the "Ode to Solitude" a hundred years ago, one looks down the long valley where the stars sleep, and dreams and dreams. . . .

In Bibb County, at the opening of the war period, Brighthope was the county's only furnace. Jonathan Newton Smith became interested in this plant, together with William P. Browne and Alexander Knowles Shepard. Early in 1861 a second furnace was constructed in this county by a company composed of Colonel C. C. Huckabee, Jonathan Newton Smith, S. G. Wilson, Gray Huckabee, J. D. Nance, and —— Huntington. Colonel Huckabee, who died in 1907, once said: "I did not start my furnace with the notion of making iron for the Confederate government, but to supply the farmers and the cotton planters, who were much in need of it. There was a demand from them on every side."

Caswell Campbell Huckabee, unlike Horace Ware, was not "born to the iron trade." He was a planter and large slave owner as were his fathers before him. He was born in North Carolina, in 1818. After a term at the University of Alabama, he settled on the rich lands in and about Greensboro. Straight along up to the opening of the war he worked his cotton plantations, and his relations to the iron business were those of patron and purchaser rather than iron-master. After prospecting around the country with Jonathan Newton Smith, he hit on a site for his first plant, afterwards known as Bibb furnace or Brierfield furnace, and later as Strother furnaces.

"I set all my niggers to work in the woods," said the colonel, "and for many a day after that, the axes sounded like thunder in the pines!" His company acquired large ore holdings and timber lands, the nucleus of the estates owned to-day by the Southern Mineral Land Company. The original furnace was cold-blast. Some of the machinery was bought at Montgomery and some from Brierfield, Mississippi, where President Davis lived. "It was possibly this circumstance that gave the place its name," William Wallace McCollum says, "although other accounts are also told."

Samuel Greene Wilson of Memphis, Tennessee, who served as manager of the Brierfield furnace, writes:

"We secured the most skilful and efficient workmen possible, both in and out of the State, and in a few months were turning out some twenty-five tons of first-class iron a day, for which we found ready sale. In the course of a year, finding that wrought iron was more profitable than cast iron, we began looking for a place convenient to a railroad, for a rolling mill. We secured a site on Mahan Creek, the water power being used for our mills. We constructed a tram road from the furnace over to the mill. The land was a perfect network of briers and blackberries. We experienced so much trouble in running the tram road through this old field that it was suggested that we call the mills Brierfield. Quite a colony grew up around these mills and later the railroad moved the depot from Randolph to Brierfield. Not a great while afterwards the Confederate government secured the plant and made M. J. Wicks of Memphis, Tennessee, superintendent."

Mr. Wilson had come into Alabama as a little boy, with his parents, in 1837, from South Carolina. On their old plantation in Tuskaloosa County, the town of Moundville is now located.

In the Brierfield mill project Colonel Shepard was also associated with Colonel Huckabee, and Richard Fell was employed to construct the mills. Alexander Knowles Shepard was born in Matthews County, Virginia, on the sixteenth day of May, 1819. His father was Seth Shepard, who had moved from Massachusetts, his native State, to Virginia, and had married there a Miss Mary Fontain Williams of Matthews County. The first Shepard emigrant had come from the north of England, where he had married Thankful Knowles, and he had settled in Wilbraham, Hampden County, Massachusetts. After serving Virginia, as a member of each of her legislative houses, A. K. Shepard moved to Alabama about 1856, and settled in Dallas County. He entered into politics immediately upon his settlement in this State, and was elected to the lower house of the Alabama legislature. He took an active part in the exciting debates just prior to the war, on the side opposed to secession. When the time for fighting came, he ceased debating, and went to the front. After one year's campaigning in Virginia, in the artillery branch of the service, he was detailed back to Alabama to manufacture iron for the Confederacy. He had previously been connected with the Cane Creek Iron Works. After the war Colonel Shepard retired to his plantation in Perry County, and subsequently took a large contract to build the railroad from Marion Junction to Akron. The failure of this road caused Colonel Shepard heavy loss. He soon moved

to Louisville, Kentucky, where he became engaged in street railway management. Here he discovered Tom L. Johnson, then a boy helping to support his mother by selling newspapers on the streets of Louisville. Colonel Shepard recognized the ability in this boy, who eventually became mayor of Cleveland, Ohio. He took him into his office, where young Johnson began his wonderful career as a street railway magnate, by putting up packages of change for the conductors. After ten years of association in Louisville, Colonel Shepard and Tom Johnson purchased street railway interests in Indianapolis. Not long after this Colonel Shepard sold out to Mr. Johnson, and, with the Carter brothers, purchased the Brierfield furnace, with which he had been associated during the war. They operated this plant for some time, Shepard finally selling his interest to the Carters. From the year 1886, until his death in 1898, Colonel Shepard resided in Birmingham, Alabama.[1]

In regard to the old Brierfield works, in the eighteen-sixties, Mr. McCollum states:

"The Confederate government purchased the plant from Messrs. Huckabee, Smith and Company, by a forced sale. Major Hunt was placed in charge of the works. His headquarters were in Selma, but his assistant commander was a Colonel Erwin, who was in personal command of the plant and its operation until the works were destroyed by the Federals."

Concerning the sale Colonel Huckabee said:

"I was told that I could do one of three things: Let the government have all the iron I made, or either lease or sell the property to the government; otherwise the whole plant would be attached. I sold my two furnaces and mills, the whole plant, for six hundred thousand dollars. But it was Confederate money!"

The purchase of the Brierfield works was instigated by George Peacock's report, to which allusion has been made. Mr. McCollum also says:

"To George Peacock was entrusted the responsibility of selecting the pig iron that was to be cast into heavy naval ordnance. Mr. Peacock carefully inspected the various lots of iron that had been furnished from different localities. So when he had inspected

[1] Information received from A. K. Shepard of Chicago, Illinois, son of Colonel Shepard, and Thomas S. Forbes of Birmingham, Alabama, a son-in-law of Colonel Shepard.

the lot of iron from Brierfield he reported to the commander that the Brierfield iron was the toughest and most suitable iron for making guns and above any other iron in the South. Mr. Peacock's report went to Richmond, the seat of government, and as the supply of Brierfield iron was limited, the government seized, or what was then called pressed, the Brierfield works. The government then increased the force of labor and enlarged the capacity of the plant, adding a new hot-blast furnace. The entire product was appropriated for naval and military purposes during the remainder of the war. This connection of the Confederate government with the original Brierfield works, I am familiar with, as I was in the service of the government, in the capacity of a mechanic at Selma during the entire war. The employment of Brierfield iron in the construction of heavy guns gave the iron a national reputation." [1]

S. G. Wilson writes:

"The proceeds of my share of the sale of the iron works I invested in property on what was known as Six Mile Creek, consisting of grist and flour mills, together with a small mill and other fixtures situated on the road leading from Marion to Montevallo. I also erected a set of iron works here, converting the crude ore into malleable iron. To utilize all the water power, I added machinery and used the timber in wagon making. We took contracts to furnish government wagons from this native wood and ore. Being located on so public a thoroughfare, with the cavalry divisions of Generals Loring, Pillow, Forrest, and part of Wheeler's cavalry constantly passing, we were forced to abandon the usual work, and shoe horses and feed and house the soldiers. We kept the mills running night and day, supplying meal and flour to the population of a large area of country. I disposed of this property to Noah H. Thompson and moved to Hinds County, Mississippi, after the close of the war. My iron works were destroyed together with the other iron works of the State, by Federal cavalry, in 1865."

During the war there was established in Bibb County another forge (at Adams Dam on the Little Cahaba), and also a nailery. Mr. Frank Fitch of Brierfield says:

[1] An incident related by F. M. Grace, a son of Baylis Grace, refers to the Brierfield plant, at the time of the sale of the iron works, just after the war: "On exposing the property for sale as having been owned by the Confederate government, Colonel Huckabee stood up and forbade the sale. 'On what ground?' demanded the officer. 'On the ground that Congress has set aside the acts of the Confederate government as null and void, and in so doing they cannot become the lawful owners of my property.' A lawsuit followed which was carried through the courts by Hon. John T. Morgan until it reached the Supreme Court, where it was finally decided against Colonel Huckabee on the ground that he had used the property for hostility against the United States and therefore it was to be condemned as contraband of war."

"Colonel Shepard, Colonel Huckabee, and Mr. McLemore were connected with this nailery which was started by Jonathan Newton Smith, near the Little Cahaba River. An expensive and substantial building was set upon massive stone formation. Nail-cutting machines of English manufacture, in large numbers, were procured. Every appointment was complete to begin operations, when Wilson's cavalry swept over Bibb and other counties, clearing smoke-houses, chicken yards, and hog pens, and destroying all forges, furnaces, mills, and industrial establishments. The Cahaba nailery went in the common and widespread destruction. The dam was torn from its stone abutment and has not been rebuilt. Mr. Smith used the timber left from the buildings on his plantation, and the nailery tract of several hundred acres is now classed as wild lands of his estate."

Also during the war a branch of the Selma, Rome, and Dalton Railroad (now the Southern) at Ashby, Bibb County, Alabama, was graded, and costly rock-arched culverts were put in. The branch ran northwestwardly about four miles, and ended at Four Mile Creek, a very short distance above its confluence with the Little Cahaba where the nailery stood. This branch was constructed for the purpose of utilizing the nailery, as business on the way, but with the more important object of touching the Cahaba coal field, which was only about one mile from where the grading ended. Judge Thomas A. Walker of Jacksonville, Alabama, was then president of the Selma, Rome, and Dalton, and he inaugurated this branch road. The grade has been resurveyed in recent years.

Just across in the neighboring county of Shelby, in the spring of 1862, a Welsh iron-master, Giles Edwards, was at work. To his labors, projects, and discoveries are traced some of the richest mineral holdings in Alabama, belonging now to the Tennessee Coal, Iron and Railroad Company, and to the Republic Iron and Steel Company. Three States bear witness to his handiwork: Pennsylvania, Tennessee, and Alabama.

Edwards was born on a small farm at Merthyr Tydvil, in Glamorganshire, South Wales, September 26, 1824.[1] In the neighborhood where he spent his early boyhood there were many huge iron works.

Merthyr was then called the iron metropolis of Wales and had the most extensive iron works in the world. Iron had been made

[1] Information received from Mrs. Salinah Evans Edwards of Birmingham, Alabama, widow of Giles Edwards; Mrs. J. W. McQueen, daughter of Giles Edwards; R. K. Edwards, son of Giles Edwards.

there as far back as 1660. Near the boy's home, under the shadow of old medieval castles, were remains of old blast furnaces that were built to smelt the Roman cinder. Ships laden with ore from South America and Australia hailed into Cardiff, and the iron went forth to all the world. The entire horizon was peopled with shadowy furnaces, the great works of Dowlais, Cyfartha, Plymouth, and Penydarren.

Iron was in the boy's blood. He entered the shops at Dowlais and received his technical training from the Croziers. He became an expert in mechanical drawing before he was eighteen years old. His mother died about this time and his father determined to go to America. Together with Giles, Jr., he set sail and after more than a month's voyage, landed at Quebec, Canada.

From here they went direct to Pennsylvania, to Carbondale, in picturesque Luzerne County. This was about 1842, ten years before the town was incorporated, but being so near the head of the Lackawanna River, it was in the very midst of the important coal mining district of Pennsylvania. Young Giles Edwards started right off at his job, made the drawings, and superintended the pattern making for the first mill at Carbondale. This was then but a crude mining settlement in the heart of a wilderness, but it was as beautiful as his native country, as the picturesque "Vale of Glamorgan," and here it was the young Welsh boy met the girl he married.

She was little Salinah Evans, the daughter of a Welshman who had emigrated with his family from Cardiff. Their home had been at Tredegar, Monmouthshire, the very county that bound Glamorgan on the east. And they had come across seas in a vessel laden with iron, had landed in New York, and come straight to Carbondale.

Selinah Evans was not more than thirteen years old when Giles Edwards, who was nineteen, met her. From the first he loved her and set to work to make a home.

Scranton became the depot and shipping point for the product of the North Anthracite basin and the center of the trade in mining supplies, outfits, and immense shipments. The Welsh congregated here and helped things move along. Giles Edwards was one of many, but he had a strong hand in the planning and building of the first shops and manufactories of iron and mining machinery there. His good work drew the attention and interest

of Hopkin Thomas, father of Samuel and John Thomas, who later became such great factors in the iron industry of Pennsylvania and Alabama. So Giles Edwards left Scranton and went to work for Mr. Thomas, down into Schuylkill County, which was then known as "the southern coal field," and superintended the Thomas works at Tamaqua on the Little Schuylkill River. When the work of building a foundry was done there he went with Mr. Thomas to Catasauqua. The Thomas family was the most prominent family of Catasauqua. David Thomas, the "father of the American iron trade," was the chief man of the village, and he had a library that was a treasure house for all the growing young iron-masters of that day. Giles Edwards worked by day, superintending the blast furnaces and making plans, and he studied by night. His health broke down and John Fritz took hold of him and made him quit. He had made a trial for a space in New York, with the Novelty Works, but had returned to Catasauqua and started at overworking again, so Fritz held him up, talked of a milder climate for him and persuaded him to go to Chattanooga.

"I could not bear the idea of his going South at first," Mrs. Edwards said. "I thought he would burn up! I thought we all would, but I finally agreed to it."

This was the way in which Giles Edwards and his family came South, and began at Chattanooga, in June, 1859.

Tennessee was then in the front rank of the iron producing States of the South. There were then over seventy-five forges and bloomeries, seventy-one furnaces, and four rolling mills, as enumerated by Leslie in '56. The Bluff furnace, to which Giles Edwards was assigned to remodel, had been built five years before by Robert Craven, James A. Whiteside, and James P. Boyce, for using charcoal. James Henderson of New York, manager of the East Tennessee Iron Company, had the plant in charge and had decided to make it a coke furnace. He had the limestone stack torn down and a new iron cupola with stack eleven feet wide at the boshes erected in its place, the work being planned and superintended by Giles Edwards.

In his "Iron in All Ages," Swank says:

"The new furnace was blown in in May, 1860, but owing to a short supply of coke the blast lasted only long enough to permit the production of about five hundred tons of pig iron. All the machinery and appointments of the furnace worked satisfactorily.

The furnace was started on a second blast on the sixth of November, the day of the Presidential election, but political complications and the demoralized state of the furnace workmen were obstacles too great to be overcome and the furnace soon chilled from the last cause mentioned, and in December Mr. Henderson abandoned the enterprise and returned to New York."

This was, however, the first coke furnace in Tennessee. During the stay of the Edwards family in Chattanooga an event of considerable romantic interest to the iron and steel men of the country happened in their house. The incident concerned "Captain" William R. Jones who afterwards became known as "the most important man in the Carnegie scheme." Then he was just Bill Jones.

The Edwards family had known him in Catasauqua, where he had first come as an apprentice to the Crane Iron Company when only a boy in knee breeches; he had wrecked the Catasauqua school house when he thought a "pal" of his had been unjustly punished, and had led the gang of Welsh boys in feudal strife against the Irish at the other end of the town. He was ever a fighter, but always square.

He had met Harriet Lloyd a short time before the Edwards family moved South, and Harriet Lloyd was a very pretty girl. Her relatives were alarmed when Bill Jones loomed up as a suitor, and all the more because Harriet — in spite of her suitor's expletives and this record for scraps — liked Bill Jones right well.

Mrs. Edwards was Mrs. Lloyd's best friend, and it was to her that Harriet was sent "for a long visit," with the prayer, "whatever happens don't let Harriet marry Bill Jones!" and Mrs. Edwards gave her sacred promise.

Nobody thought of Bill Jones going to Chattanooga, but there he went, and when he could not get a job in the iron works he set up a saloon and a pool and billiard room, and then laid siege to Harriet Lloyd. Giles Edwards' good wife was in dismay. Every day young Bill Jones came and every day Mrs. Edwards said to him:

"Promise me you will not marry Harriet."

Young Jones was rather soft-hearted and he could not refuse Giles Edwards' wife, so he promised every time, but never failed to add:

"Not to-day, Mrs. Edwards — I promise; I will not marry Harriet to-day!"

A day came, however, when he avoided Mrs. Edwards, and consequently, made no promise. He had chosen his wedding day, and Harriet Lloyd became his wife.

But to return to Giles Edwards. No sooner had the Bluff furnace been put into working order than in March, 1862, at the request of Judge Lapsley of Selma, whom he had met in New York, Mr. Edwards came into Alabama, and reconstructed the

Shelby Iron Works. The work at Shelby was continuous, the rolling mill originally built by Horace Ware being steadily and successfully operated all through the war. It was in 1864 that the plates for the armor of the ironclad ram, *Tennessee,* were rolled by the Shelby rolling mill.

A memorandum from John E. Ware reads as follows:

"March 18th, 1862, Horace Ware sold six-sevenths interest of his iron property at Shelby to John W. Lapsley, James W. Lapsley, John R. Kenan, Andrew T. Jones, John M. McClanahan, and Henry H. Ware for the sum of one hundred and fifty thousand dollars. This property then consisted of one charcoal blast furnace of eight tons daily capacity, one rolling mill of ten tons daily capacity, a foundry, saw mill, and six thousand acres of timber and mineral lands. These seven men incorporated the Shelby Iron Company and erected another furnace, and operated the works until April, 1865, when the plant was destroyed by Wilson's raiders."

One of the foundrymen then employed at Shelby was Hamilton T. Beggs. He was born in 1830, in Liverpool, England. Like George Peacock, he served a steady apprenticeship as a boy, and came to the United States in his nineteenth year. He worked as a journeyman several years, following his trade in several of the States. Late in the eighteen-fifties he set up his own foundry at Chattanooga, Tennessee, and by 1861 was casting guns and bombshells for the Confederacy. Horace Ware then sent for him. Beggs worked at Shelby until the war's close, then at Columbiana, and in the year 1879 moved up to young Birmingham. Here he built the first foundry and machine shop of that city.

CHAPTER XIII

IRON MAKING IN WAR PERIOD (*continued*). THE FALL OF SELMA

Work in Talladega, Calhoun, and Cherokee counties. Erection of Salt Creek Iron Works. Samuel Clabaugh manager of enterprise. Oxford furnace and Janney furnace built in Calhoun County. Judge Randolph's account of Oxford Iron Company. Part taken by old Southern Railroad. Anecdotes of the war. Destruction of plants in Rousseau's raid. Jackson County operations. Records of Cherokee County furnaces. Construction of Cornwall furnace. Entrance of James Noble and his sons into Southern field. Biographical sketch of Mr. Noble. His early association with mining enterprises in England and in the United States. First locomotive built south of Virginia at Noble Foundry. General survey and summing up of all county records during Civil War. List of plants in operation. Estimate of Alabama's share of iron making during Confederacy. Selma the main objective point to the enemy. "Defend Selma at all costs." Description of fortifications. Formidable style. Physical conditions in Alabama in last days of war. Advance of the enemy. Forrest's attempts to ward off attack from Selma. April 2, 1865. Disposition of Confederate forces. No men to man the guns. "Into the works or into the river!" The enemy before the works. Gun firing. Forrest's tactics versus Wilson's. One of greatest cavalry feats on record in Union Army. Fight to the death.

IN Talladega County, in addition to the Knight furnace and the various forges manufacturing iron before the war, whose records have already been presented, there was a second furnace constructed in the eighteen-sixties. Judge Miller says:

"In December, 1863, Samuel Clabaugh and James A. Curry began the erection of an iron furnace on Salt Creek in Section 17, Township 17, Range 7, in Talladega County, on the spot where Jenifer furnace now stands. They built a substantial stone stack, a portion of which existed as late as 1893 in the stack of Jenifer furnace. James A. Curry was a half-brother of Honorable Jabez L. M. Curry, statesman, diplomat, and educator, and one of Alabama's representatives in Statuary Hall in the capitol of the Union. Mr. Curry was, until the breaking out of the war of secession, a merchant of large means located in the town of Talladega. He was the owner of the lands on which Salt Creek furnace was built. Samuel Clabaugh was a brother-in-law of Horace Ware. He had many years of experience in connection with Mr. Ware, in the development and operation of the Shelby

furnace, and was the head of the firm of Clabaugh and Curry in erecting and operating the furnace on Salt Creek."

In 1881 this furnace was named Jenifer by Samuel Noble in honor of his mother, Jenifer Ward Noble. The Alabama Iron Company, in which Horace Ware was a large stockholder, operated it until it was sold to Sam Noble and Horace Ware, and made a part of Clifton Iron Company. It is now a part of Alabama Consolidated Coal and Iron Company.

In Calhoun County there was but the one furnace plant prior to the war, which has been heretofore recorded, the Cane Creek or Benton Iron Works. During the war the construction of two more was undertaken, the Oxford furnace and the Janney furnace. The group known as Woodstock, built by Samuel Noble and General Daniel Tyler, is not approached until the eighteen-seventies. The Cane Creek works furnished the Confederate Government with a steady output of iron right up to the day of their destruction by General Rousseau, a year preceding Wilson's raid into the central counties. George B. Randolph sends the following account of the two war time furnaces of Calhoun County:

"Old Oxford furnace was owned and operated by the Oxford Iron Company. It was located on the west side of Furnace Hill in the present city of Anniston, just south of where Fifth Street intersects the hill, on land bought from D. P. Gunnells, of Oxford. The company comprised Judge Richard L. Campbell, president; George G. Pattison, secretary and treasurer; Fred Woodson, Charles Woodson, M. C. Wiley, John Weeden, William S. Knox.

"The furnace was built in 1862, and incorporated under the laws of Alabama with a capital stock of twenty-four thousand dollars. It went into blast in April, 1863. It was a charcoal furnace of from fifteen to twenty tons daily capacity, and made a fine quality of iron. Its bosh was nine feet, with a stack forty-five feet high. The ore was taken from within a few hundred yards of the furnace. This old Furnace Hill contained large quantities of brown iron ore; in fact, mining was carried on continuously on this hill until this property was surveyed and sold for city lots. In grading the lots, and digging out the streets and alleys much excellent ore was found and sold to the furnaces. The furnace was built of rock and stone taken from the hills near by.

"The company owned eight hundred and twenty-five acres around the furnace, besides some timber land for charcoal purposes. However, they seemed to use a free hand in cutting timber in those days, as they cut the timber from two hundred acres of land, at that time owned by the old Alabama and Tennessee Rivers

Railroad's (now the Southern) land grant, adjoining the city of Anniston on the west. At that time the railroad was built to Blue Mountain station, its terminus being about where that road now passes the corporate line north. The Oxford company used the railroad to ship their product to Selma to the Confederate ordnance department, where it was made into cannon, shot, and shell. Much of it was also used for making plates and machinery for the Confederate ironclads built at Selma. In fact, the Confederate government depended mainly on Calhoun, Shelby, and Bibb counties for their supply of iron.

"William J. Edmondson, still residing in the suburbs of Anniston, and probably the largest individual landowner in the city and suburbs, was the blacksmith at this old furnace, and has a good stock of reminiscences to relate.

"The troopers asked some negroes, 'Who is that man running?' and were told it was the blacksmith. Their horses needed shoeing, and they needed a blacksmith, so they pursued, yelling to him to halt; but he outran them and made his escape to the mountain. However, the next morning he visited their camp at Blue Mountain station, and an officer brought him his horse to be shod. Mr. Edmondson shod the animal, and the officer was so pleased with the job that he gave Mr. Edmondson five dollars and a new hat. He spent the rest of the day shoeing horses for the men, who paid him at the rate of fifty cents a shoe in 'shinplasters' for his services. Mr. Edmondson says this is the first United States money he ever had.

"The Oxford Iron Company was a stock company, and after its destruction the shares were held by many different persons, among them Thomas K. Ferguson, a Selma banker; Major Thomas Peters of Birmingham, Joseph A. Jones, now residing in Birmingham, Henry Clews, the New York banker, and many others."

Another incident of the war is related by Robert Turner of Talladega County, and now eighty-one years of age. He says in the year 1865 he was detailed from the army to work in the blacksmith shop under the quartermaster at Blue Mountain station. There was a large depot of supplies at that point, some seven hundred men, and a large number of teams. The men were composed of convalescents, home guards, and pardoned deserters, all under the command of General Hill. When the report came that Croxton's detachment was coming up the railroad from Talladega, the general got his mixed forces together to meet the invader. Mr. Turner being the blacksmith, considered himself a non-combatant, but went along to see the fight. All of General Hill's boys had heard of General Lee's surrender, and consequently had lost heart. Before coming in sight of the

Federal troops they melted away. General Croxton, therefore, came on and destroyed the Oxford furnace. Mr. Turner had been instructed to gather up the teams and load the meat and other supplies and take them to a place of safety. These supplies consisted of tithes, gathered in from the farmers, each bringing in one tenth of all he produced. Mr. Turner conveyed a number of loaded wagons to Cane Creek Mountains, some ten miles west of the station, where he remained until the Federal troops left. He says that after destroying the furnace they moved on to Blue Mountain station, which was about a mile and a half north of the furnace. There they destroyed the railroad station, the quartermaster stores, and a number of cars, some of which contained loaded shells and other mixed ammunition. It was an awe-inspiring sight he witnessed from the top of the mountain, the flames shooting up a hundred feet or more and illuminating the heavens. He could hear the terrible explosions too, from the shells in the burning cars. Much of this ordnance and ammunition had just previously arrived from Selma, having been shipped to prevent its falling into the hands of General Wilson who had captured that city a short time before. The Oxford furnace lay dormant until several years after the war when Samuel Noble and his brothers revived the property.

Concerning the Janney furnace, Judge Randolph writes:

"In 1863 A. A. Janney, a foundryman of Montgomery, Alabama, was buying pig iron from the old Goode and Moore furnace on Cane Creek, when he was attracted to the large deposits of brown ore in that vicinity. He bought lands some five miles northwest of the Cane Creek furnace, near the present Ohatchie station on the Seaboard Air Line Railroad, and about two miles east of the Coosa River, at the old Ten Island ford. During that year he and his partner, Ned Lewis, started to build a furnace on land purchased from William Griffin, a farmer of that vicinity.

"They located the site for the furnace in the southwest ¼ of southwest ¼, Section 21, Township 14, south of Range 6, East. On the south side of an iron ore ridge they made a huge excavation and built their furnace — or at least built the stack and brick chimney for stove flues. With an eleven-foot bosh and a stack fifty feet high they expected to make fifteen tons of charcoal iron daily.

"The masonry for the furnace was quarried from the fine sandstone deposits near the furnace. The top of the stack was flush with the top of the ridge. The iron ore, being within wheelbarrow distance, was gathered up and deposited near the top of the stack to be charged into the top of the furnace. It seems that Mr.

Janney bought out the interest of Mr. Lewis in the enterprise. They intended to get their flux from the limestone deposits over in the 'six-foot' valley only a few hundred yards north of the furnace. The furnace was built in a forest where timber was right at hand for charcoal purposes. The terminus of the old Alabama and Tennessee Rivers Railroad Company was then at Blue Mountain (now Anniston), some sixteen miles from the furnace. Mr. Janney expected to haul his product to the railroad during low stage of water in the Coosa, and to use flatboats when the stage of water would permit it to be taken down the river.

"Mr. Janney employed some two hundred negro laborers to do this work. They were slaves, 'refugees' from Tennessee, brought from there by one Dr. Smith to keep them out of reach of the Federal army, then advancing through that State.

"On the morning of July 14, 1864, General Lovell H. Rousseau, U. S. A., crossed the Coosa River at the old Ten Island ford, and after capturing a few 'home guards,' who were trying to prevent his crossing, reached this furnace, and put the torch to the sheds and shacks of the employees and the cord wood, then proceeded on his raid further south.

"Professor L. D. Miller, former superintendent of education of Calhoun County, Alabama, in his 'History of Alabama,' relates the following account of the destruction of this historic furnace:

"'With 2,300 picked men and horse, General Rousseau left Decatur on July 10, 1864, and moved rapidly to the southwest through Somersville. He sent a detachment into the town and captured some needed supplies for his command. He reached Greensport, on the Coosa, late on the afternoon of July 13, near which point his rear guard was fired into by some Confederates and three or four men were killed or wounded. Here he sent back three hundred of his men who were poorly mounted.

"'General Rousseau learned that General Clanton was on the other side and would oppose his crossing the next morning. He secured the ferryboat after dark by means of two volunteers who swam the river and got it. Several hundred men then crossed over silently in the night. General Clanton's men, for once caught unaware, waited in fancied security to oppose the crossing next morning. They were assailed on the morning of the fourteenth unexpectedly, on their flank, by the Federals, who had thus crossed during the night, a force almost equal to their own numbers, and hence could make but feeble resistance to the crossing of the main body at the ford. All of General Clanton's staff were killed or wounded, together with several others of his command, and the Confederates were forced to retreat in haste.

"'The Federals got across with small loss. The ford was the same crossed by General Jackson when he started from Fort Strother, on his way to fight the Indians at Talladega. The big stone dam built by the United States government at Lock No. 2, Coosa River, is built across the old Ten Island ford.'

"General Rousseau burned Janney's iron works and Crow's iron works (both in Calhoun County) the same day, and reached Talladega the next day, the fourteenth. There he destroyed a lot of Confederate stores and burned several cars and the depot and contents. The latter contained the county records of Calhoun County, whither they had been shipped the day before for safety from the approaching raid.

"There was a lot of machinery hauled from Mr. Janney's foundry in Montgomery, and deposited at the furnace site, where it remained until a few years since. It consisted of boilers, fly wheels, and different sizes of small wheels, shaftings and pulleys and stoves for the hot blast — in fact, about everything necessary for equipping the furnace. I am informed that Mr. Janney did not lose heart at General Rousseau's visit, but after the general's departure worked with renewed energy, and hauled much valuable material to his plant until the close of the war.

"The material remained there on the ground until a few years ago, when, I understand, it was sold for junk or scrap. The brick chimney was torn down and carried away. The old stack still remains as a monument of the wasted energy of the builder. At the close of the war Mr. Janney paid off his debts, and Dr. Smith and his negroes returned to their old home in Tennessee. The Janney foundry in Montgomery continues in operation to this day, and the old furnace property is still owned by this firm."

In Jackson County a blast furnace was constructed in 1861. Saltpeter was made here in large caves, during the war. An incident of interest relative to this county was that, at the outbreak of the war, General John B. Gordon was operating coal mines here. But he dropped the coal business at the first shot, raised a company called the "Raccoon Roughs," which was enlisted in the Sixth Alabama, of which Gordon soon became colonel. Serving on General Gordon's staff was a son of Samuel G. Jones, now Judge Thomas G. Jones.

In the county of Cherokee, which adjoins Calhoun on the north, there were three furnaces supplying iron to the Confederate government: the old Round Mountain furnace whose records were given in Moses Stroup's biography; the Rock Run furnace, and the Cornwall iron works. The destruction of Rock Run was accomplished early in the war at the time of Streight's raid. The stirring tale of General Forrest and the girl, Emma Sanson, all told over and over again by the local historians, is "glorious incident of this time and place." One halts a second, riding by, and salutes the brave girl and General Forrest.

The Cornwall furnace was put up immediately at the out-

break of the war by the firm of James Noble and Sons, of Rome, Georgia. It was a six-ton charcoal furnace, located on the Chattooga River, near Cedar Bluff, and adjacent to an ore field discovered late in the fifties by James Noble and his son, Samuel Noble. They named the plant after their home county in England. The Noble foundry in Rome, Georgia, was one of the first enlisted by General Gorgas to supply ordnance department needs. These iron works were then the most extensive in the State of Georgia. Back of their founding is an odd little incident linking them with early iron making days in Alabama. In an earlier chapter mention was made of the fact that Jonathan Ware and Edward Mahan of Bibb County sent a specimen of their best charcoal blooms to the Sydenham Exposition in 1851, where it took first prize. Now it happened that the excellent and fibrous quality of this iron so attracted James Noble, one among the many thousand sightseers, that it led to his decision to prospect through the Southern States of America, in search of the ore that could turn out that quality of iron.[1]

Mr. Noble had then had rather an extensive and unlucky experience in Pennsylvania, to which State he had immigrated in 1837. He was a Cornwall boy, descendant of a long line of iron and mining men. His father was a copper and tin mine owner, and he, born in Cornwall in 1805, had been brought up to the trade. In 1826 he married Jenifer Ward, a descendant of the La Hammells of France and the Brockenshires of London. Upon leaving England with his family for the United States, Mr. Noble settled at Reading, Pennsylvania, and built there a foundry and machine shop. He had fourteen children, twelve of whom (six sons and six daughters) lived to maturity and seven of whom survive to-day. His works at Reading were destroyed by both fire and freshet. When, on his return visit to the mother country to see the big world's fair, he ran across the southern brand of iron, he decided then and there to go South. The larger market for his foundry products had always been in Tennessee and North Carolina. Returning, he completed his inspection tour, and deciding to locate at Rome, Georgia, he shipped his machinery by sea, and with the help of his six boys, each one of whom he had trained to the business, he erected his big foundry and machine shops at Rome, in the summer of 1855.

[1] Data obtained from papers loaned by Miss Mary Noble of Anniston, Alabama, sister of Samuel Noble.

The Nobles manufactured steam engines of a superior make and a great variety of other kinds of salable machinery and castings. Prior to the war they built engines and boilers for steamboats plying the Coosa River. They also made a twenty-five ton locomotive which was the first built south of Richmond, Virginia. The Nobles had also, in connection with their Rome enterprise, a large capacity rolling mill, making all classes of merchant bar iron, and supplying the market in a wide territory. On their prospecting tours into Alabama after iron ore, particularly in the wilds of Cherokee, James Noble and his sons are said to have been taken by the county folk for escaped lunatics because they filled bags and pockets with the useless "dye rock."

John E. Ware says:

"The product of the Cornwall Furnace plant was consumed in their shops at Rome in making cannon and shot for the Confederate government, and in the manufacture of horseshoe iron for the cavalry service. This furnace was destroyed in 1864 by the Federal forces under General Blair, and in 1865 General Sherman ordered the destruction of their works in Rome, which included a large brick foundry, machine works, gun carriage shop, pattern and smith shops, and rolling mill. Before the torch was applied, however, Sherman took the wise precaution to save the very valuable machinery by dismantling and shipping it to Chattanooga and Nashville which were inside the Union lines. Immediately after the war the Nobles rebuilt their works on a more extensive scale and began the manufacture of railroad car wheels and axles, and to their rolling mill they added a large nail mill, making as much as one hundred kegs of nails per day."

The account of the formation of the Woodstock Iron Company in Alabama, the founding of the city of Anniston, the whole story of the reconstruction and regeneration of the industrial life of the northeastern section of our State by the sons of James Noble and General Daniel Tyler and their associates, make a chapter in Alabama's history well worth while.

A review of the circumstances relating to iron making during the Civil War has thus shown that there was a total of sixteen blast furnaces and six rolling mills in existence in Alabama at that time. The popular estimate has ever been vague. "Some four or five," is the way it is generally put. No complete official records or statistics referring to the matter have been found. As far as is known this table is complete.

BLAST FURNACES IN OPERATION DURING THE WAR

Name of Furnace Plant	County	Tons (daily capacity)
1. Hale and Murdock Iron Works	Lamar	11
2. Roupes Valley Iron Works (Tannehill)	Tuskaloosa	20
3. Red Mountain Iron Works (Oxmoor)	Jefferson	20
4. Cahaba Iron Works (Irondale)	Jefferson	20
5. Bibb Furnace (Brierfield)	Bibb	25
6. Brighthope (Little Cahaba Iron Works)	Bibb	12
7. Shelby Iron Works	Shelby	15
8. Knight Furnace (Chocolloco Iron Works)	Talladega	8
9. Salt Creek Furnace (Jenifer)	Talladega	10
10. Cane Creek Iron Works	Calhoun	8
11. Oxford Furnace	Calhoun	15
12. Janney Furnace (unfinished)	Calhoun	15
13. Round Mountain Furnace	Cherokee	12
14. Rock Run Furnace	Cherokee	14
15. Cornwall Furnace	Cherokee	6
16. Jackson Furnace	Jackson	8
Total		219

ALABAMA ROLLING MILLS IN SERVICE DURING THE CONFEDERACY

	Tons (daily capacity)
1. Shelby Rolling Mill	10
2. Brierfield Rolling Mill	10
3. Alabama Rolling Mill	10
4. Selma Rolling Mill	30
5. Saunders Rolling Mill	10
6. Helena Rolling Mill	15
Total	85[1]

This list, as will be perceived, does not comprise the numerous forges, bloomeries, and blacksmith shops, so frequently termed "iron works," whose part in the iron business up to and during the war period was by no means inconsiderable. The historian Fleming states that there is record of merely one hundred and fifty thousand tons of iron ore being mined from 1861 to 1865 by the Confederacy. But, he is careful to note, "there was probably much more." So far as Alabama's part is concerned, the amount of both pig iron and merchantable bar iron turned out by this State during the war was annually thirty thousand tons of pig iron and ten thousand tons of bar iron. This estimate is based on the table above inserted.

Every furnace and mill here recorded, as well as practically every forge and foundry in the State (excepting the Hale and Murdock plant in Lamar County), was destroyed in the war.

[1] Compiled with assistance of George B. McCormack, president of Alabama Coal Operators Association and of Pratt Consolidated Coal Company.

Of the sixteen furnaces named, only six became the nucleus of subsequent operations: Irondale, Shelby, Brierfield, Oxmoor, Salt Creek, and Rock Run furnaces. Of these there are but two in existence at the present date: Shelby, owned by the Shelby Iron Company, and Oxmoor, owned by the Tennessee Coal, Iron, and Railroad Company. Each of the old plants, however, with scarcely an exception, pointed the way to future enterprises.

All the resources of mine, forge, furnace, mill, shop, and foundry were pressed almost to bursting point by the tragic conflict. All the old ways of toil now reached their fullest expression. The mineral region of Alabama was outlined in light of the flame from the cannon's mouth; the industrial possibilities of the State were shouted abroad by heavy artillery, and the name of the city of Selma was called from end to end of the Confederacy. As the site of the great arsenal and naval foundry, and as the converging point for all coal, iron, lumber, quartermaster's and ordnance supplies for such a vast portion of the South, the place became, as a matter of course, one of the main objective points to the enemy. It was considered by the Confederate war department "the most important point in Alabama to defend." All through the correspondence of our officers ring the notes: "Look to Selma. . . . Concentrate every force at Selma. . . . Defend Selma at all costs. . . ."

Steps had accordingly been taken very early in the war, in fact, immediately following the transfer of the old Mt. Vernon Arsenal to the "Bluff City," to fortify the place strongly. Colonel Danville Ledbetter, an old West Pointer, now in the Confederate States Army, and Captain Lernier, "an experienced engineer," were assigned to the work and had under their command a large force of slaves.

The fortifications were no hastily improvised rifle pits or breastworks, thrown up haphazard just as the enemy straddled the Tennessee, but were carefully designed, well ordered, and solidly constructed. Although not to be termed in any sense "impregnable" from a military view point, they yet presented by the spring of '65 an exceedingly formidable front and, if well-manned, promised to sustain prolonged attack of a most aggressive character.

The situation of Selma, on a bluff overlooking the Alabama River, was in itself a distinct advantage. It was completely protected on its southern border, and there were natural water

defenses on both the southeastern and southwestern sides of the town, in the shape of two small tributaries of the Alabama, Beach Creek and Valley Creek. Both being miry and swampy at all times, in the rainy season they were literally quicksands; deep, almost impassable, and altogether impracticable for mounted forces. The fortifications, comprising two lines of bastion forts, extended from the mouth of Beach Creek in a three-mile horseshoe curve around the outer precincts of the city to the mouth of Valley Creek. Thus the place was stoutly protected on three sides, from river to river. Each bastioned line, a full fifteen feet thick at base, varied from eight to twelve feet in height. In front of the entire outer line which bristled with guns, a ditch was dug, shoulder deep and protected in its turn by a continuous stockade five feet high and formed of stout pine posts sharpened at the ends. The four heavy forts mounted with artillery completely covered the ground over which the enemy must advance, a wide, open field giving a full exposure of six hundred yards. This rough ground, marshy in spots and bound at the far end by a wooden ridge, was intersected by fences and a ravine with quagmire bottom and would not permit any regular formation excepting close up to the stockade and under the very mouth of the Confederate guns.

The heavy, continuous rains of months had prevented the finishing work on these fortifications. By late March of 1865, although the slaves toiled night and day, the inner line parapet with its two massive redoubts was unfinished, but the outer line parapet with its redoubts stood bold and effective. During all of February and March it rained about every other day. The whole country was flooded. Every creek and river was swollen; bridges and water gaps were washed out and fords rendered treacherous. It was impossible to move troops, wagons, and artillery with any promptness or safety. The high water held men from reaching their commands. Sometimes one part of certain of Forrest's commands would be one side of a roaring river for days at a time, with no chance to unite until the water fell. The roads were execrable, and had to be bridged and corduroyed, and frequently new roads had to be cut. The land was stripped of all subsistence for man or beast. The marches killed the horses and all but killed the men.

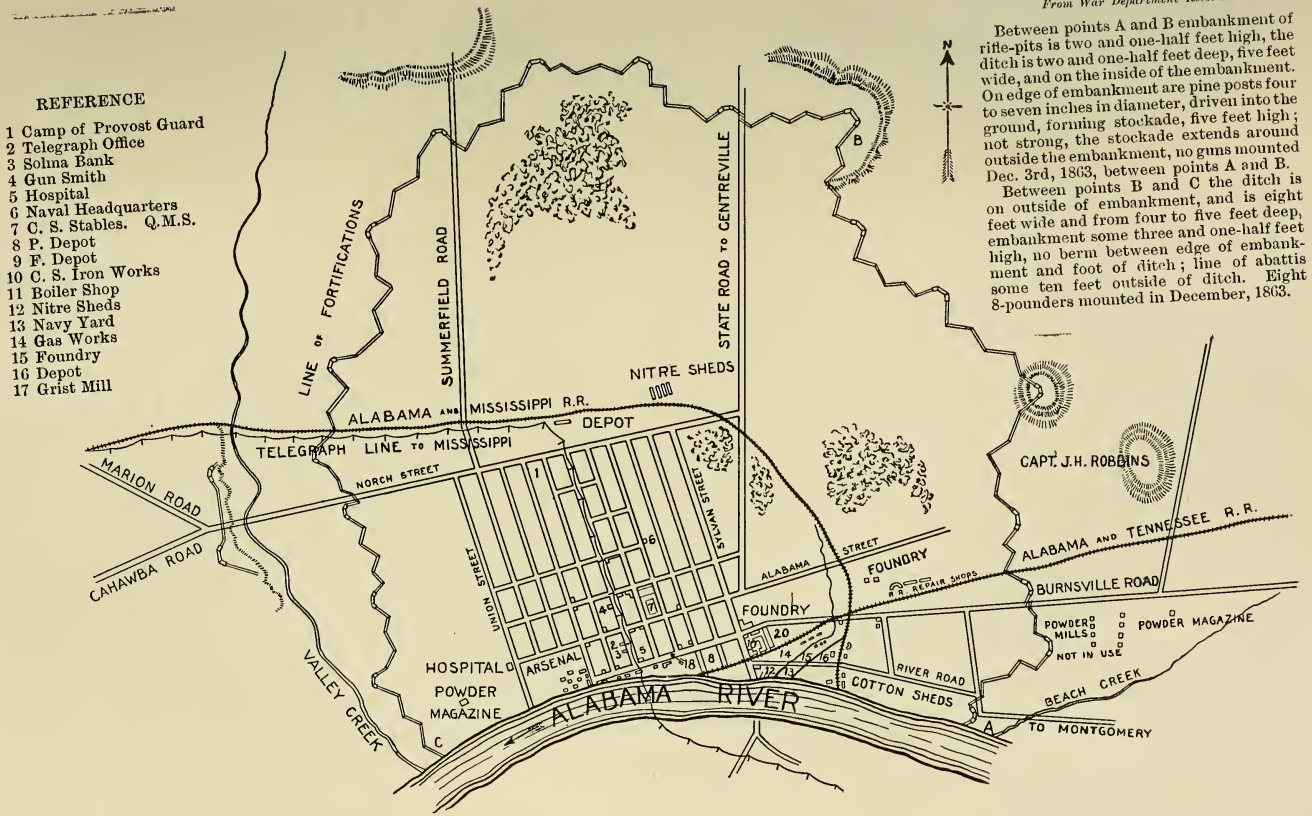
The four main roads leading into Selma—the Summerfield, the Range line or State road from the north, the Burnsville or River

DESCRIPTION OF FORTIFICATIONS IN DECEMBER, 1863

From War Department Records

Between points A and B embankment of rifle-pits is two and one-half feet high, the ditch is two and one-half feet deep, five feet wide, and on the inside of the embankment. On edge of embankment are pine posts four to seven inches in diameter, driven into the ground, forming stockade, five feet high; not strong, the stockade extends around outside the embankment, no guns mounted Dec. 3rd, 1863, between points A and B.

Between points B and C the ditch is on outside of embankment, and is eight feet wide and from four to five feet deep, embankment some three and one-half feet high, no berm between edge of embankment and foot of ditch; line of abattis some ten feet outside of ditch. Eight 8-pounders mounted in December, 1863.



road from the east direct from Montgomery, and the old Cahaba road on the west — were trodden into gulleys by both rain and traffic. The Beach Creek swamp at this particular time was beginning to encroach upon new ground; it crawled, slimy, black as a plague of snakes, clean across the Range Line road, and almost up to the boundaries of Kenan's plantation on the Summerfield road. As for the two creeks at the foot of the bastioned lines, they leaped like tigers into the huge Alabama that now, overfed, swollen, brown, and angry, growled by old Soapstone Bluff with ominous portent. If ever a spring ran mad in Alabama it was the spring of 1865, and every day the sky seemed darker than it was the day before, and the rain came down harder.

Early in March the enemy — Thomas with the Fourth Corps — was reported to be advancing from the north. Alabama thus became closed in on three sides, — north, west, and south. One invading expedition was being organized at Baton Rouge and Vicksburg, another near Mobile, another was forming in Pensacola, and on March 22, Forrest's scouts reported that Brevet Major James H. Wilson, commanding the cavalry corps of the military division of the Mississippi, was moving into Alabama fourteen thousand strong.

All through the State there were then prowling illegal organizations of cavalry, "roving bands of deserters, stragglers, horse thieves and robbers, consuming the substance and appropriating the property of citizens," to quote Forrest's own words. The country was being raked for conscripts, whereas, at the beginning of the war, the State of Alabama had responded generously to the call for troops. Now in these last days of conflict, there were no more men to send. Forrest's own troops remained loyal and efficient, but the State militia was then made up of old men, too feeble for field service, and of boys who had never shouldered a musket. Desertion was becoming an epidemic. "Only an active campaign and some brilliant success will put a stop to these disorders," was said by the leaders from headquarters in Virginia.

Nathan Bedford Forrest, with a record of fight and triumph behind him such as the world has not yet come to realize, was the real leader of Alabama, Mississippi, and southern Tennessee, and he now mustered all his forces to ward off Wilson from Selma, to protect the iron works and to contest the enemy's advance by every means in his power. Day and night in the saddle, already fatigued to point of collapse, his nerves on edge, rushing

orders to Armstrong, Roddey, Chalmers, Adams, and the rest, he bore all handicaps stanchly. "I look for no assistance from State troops," he said, and he faced the State's impotence squarely. The very clouds of the heavens seemed in league against him. It was now March 30, and the enemy was approaching Jefferson County. The scouts reported Wilson's first, second, and fourth divisions under Major-General E. Upton, Brigadier-General Eli Long, and Brigadier-General McCook respectively, marching by widely divergent routes, burning the iron works and destroying the coal and ore operations as they marched, while all were converging upon Elyton. By sunset of March 31, Wilson in person, and the divisions under Long and Upton, were on the road to Montevallo, the second point of concentration. Skirmish after skirmish followed, Forrest and all captains contesting every mile of the advance, but being outnumbered four to one, his plucky fight was of no avail. Forrest's couriers, with his final orders, his every plan of defense and movement to save Selma, fell into the hands of the enemy, and his intent to attack Wilson's rear was frustrated completely, while the enemy, forewarned, recast all plans. "Give Forrest no rest; push him on to Selma," rang Wilson's command, and it was carried out by Long and Upton to the bitter letter. On April 1 Forrest met them in force at Ebenezer station, near Plantersville, in his final stand to ward them off from Selma. Here, charged upon by a cavalry regiment, he had a hand to hand encounter with a Yankee captain at lead of the charging troops. After a running fight two hundred yards, saber to saber, his opponent lay dead at his feet and the Federal detachment were scattering, while Forrest and his Kentuckians turned suddenly to meet the reinforcements of the enemy charging them on front and flank, in full battalion!

The enemy — full fed, well clothed, organized and disciplined — equipped for victory! Every mother's son of them had a brand new Spenser carbine! Their might and their freshness — what contrast to his own boys, half starving, some of them, ill-clothed, ill-armed, — desperate! Again overpowered — his guns and many of his best men captive, Nathan Forrest cut his way out for the road to Selma and in a little space, kind darkness covered his retreat.

But the arsenal and all the iron works were doomed. Next daybreak found Forrest coming, like a wounded wolf, down the Range Line road to Selma. Ah, quarry indeed! On through

the bastioned lines he rode, and halting at headquarters of the departmental commander, Lieutenant-General Taylor, he reported the enemy at his heels. Taylor turned to the man — all covered with blood and mud, himself and his horse sodden and quivering in a bloody sweat. No, replied Forrest, quick and sharp, he was not wounded — not a scratch — and he pointed out that the chief ran risk of capture, if he stayed in Selma. When worse came to worst he could cut his own way out, — expected to meet up with his best men whom he had ordered west of the Cahaba, — but Taylor, Taylor had best get out while he could.

When the forces of Selma were turned, therefore, over to his command, Forrest took grim survey. The "forces of Selma" — God save the mark! — comprised a pack of refugees, stragglers, vagrants, who had come in from every part of the stricken, starved counties; there were also those who had escaped conscription, the militia, such as it was, and the artisans and mechanics never yet under fire. All the early plans for the stout defense of Selma had miscarried at the crisis. All Forrest could count on were his Kentuckians, and Armstrong, Roddey, Chalmers, and their now crippled brigades. There were guns everywhere, but no artillery men to man the guns. And now that he and his own men had come, half the militia were running off, fleeing the place, bag and baggage!

No more bitter cup in all the world's tales of the blood and misery of war was ever drunk by a general than Forrest drank that day at Selma. Out then sped his violent command that every man and boy in Selma, old or young, soldier or no soldier, be drowned in the Alabama if he would not fight. "Into the works or into the river" stalked that fierce order, and at point of the bayonet Forrest's lieutenants drove the panic-stricken vagrants to the guns. Blind terror quivered in every street, shivered on the doorstep of every house, — dread fear of Forrest himself.

Not a second was lost. By noon every straggler in the town was rounded up. Forrest then counted but three thousand men in all, and only one half of the number seasoned troops. The raw reserves he drove at the center of the vast horseshoe curve, facing due north and direct to the front; with his Kentuckians he took stand immediately at their rear, a very bull's eye of that vast target range.

His strongest force and main reliance was commanded by Armstrong, "the best troops in the army of the West," although sadly

depleted now, and Forrest stationed them on his left, on the southwestern or Valley Creek side of the defenses. On line with them, but outside the works, some miles across country, were Chalmers and his brave fellows couchant in the Cahaba hills. At any rate, one more try! On coöperation between Chalmers and Armstrong lay Forrest's last hope for the aggressive.

On his right, at the southeastern or Beach Creek side of the works, were assigned General Roddey and his command. All along the lines the men stood in readiness, but the wide gaps between were pitiful. Never before did great guns seem so impotent!

During the hours marking the disposition of the Confederate forces, the sound of the dark cavalcade steadily advancing — coming as the Juggernaut — filled the air with foreboding. Now it was reported that Upton's division was marching in the wake of Long's division, down the Range Line Road. Now Long was crossing at double quick by flank movement to the Summerfield road, down which Wilson and his staff were riding. Already the bluecoats were hard by Kenan's plantation. Now the Confederate picket was driven in, the enemy began to close in on the defenses. At this crisis and by Forrest's continued urging, Lieutenant-General Taylor boarded a locomotive and moved out of the danger zone. As the hour struck three, Long's division was in full force before the works; every regiment dismounted and Long began instantly to develop his line of battle, sharp at Forrest's left, and hard against Armstrong, whereupon Armstrong and the militia opened fire. Upton's division was marching in at the southeastern sweep of the works and beginning to form under Roddey's fire. From the parapets there could now be discerned columns of smoke rising from the river road near Burnsville, thus announcing the destruction of the railroad station, the bridges, and trestles, the cutting off communication with Montgomery.

Meantime gun fire from Armstrong's line kept up sharp and steady, but Long's men, under cover of the slight ridge beyond the glacis crept silently and safely into battle formation, while Wilson was taking swift reconnaissance of the works.

All at once, out of the Cahaba hills, leaped Chalmers, sharp-fanged on Long's rear. The enemy's picket guard, posted on Valley Creek, was driven in; a stampede of the pack, stock, and led animals threatened; attack in force was feigned and, for a

breathing space, demoralization of Long's ranks seemed imminent. But the hope was thwarted. Without a second's hesitation, waiting for no concerted action (if concerted action had been planned by Wilson), Long's troops rose as one man. In very earshot came the Federal general's cry, "Forward, men!" And out of cover, cool and quick, rose the sharp, blue line at crest of the ridge; it advanced into the stubble field, full in the face of a wild storm of gun fire — Armstrong's savage crossfire of musketry and artillery. Another second and the blue line broke. The charging cavalry men floundered knee-deep in the quagmire. Many of them, both officers and men, fell riddled with bullets, their breasts torn with shells. Long himself dropped, wounded. As he was carried off the field his colonels sprang to lead the charge, while high above his rear came the sudden hissing of artillery.

A battery — a reinforcement unforeseen by Forrest — half concealed on the ridge, now replied to the Selma guns and supported the Federal charge. Four hundred yards of the glacis were gained. Close to the stockade the enemy formed again and in carbine range at last, answered the Confederate musketry fire with their Spensers. Then with a yell, they started on a run in a solid line for the works; they scaled the stockade, uprooted the stout posts, leaped the ditch, and began to climb the ramparts. The first man atop of them — a young corporal — reeled back, shot through the head. In the thunder of the fire and the fog of smoke, Armstrong's men held fast, clubbing the enemy back with their guns, hurling saber stroke on stroke at them, in hand-to-hand fight now to the death. A bursting shell from the unseen battery back of Long tore a breach in the earth works near the Summerfield road behind which huddled the raw reserves. The undisciplined men broke loose and turned in panic. Back Forrest drove them in the very face of the battery fire and the oncoming troops, rushing them to stem the breach, and ordering Roddey to unite with Armstrong. But Upton was now hard upon Roddey, and before the new alignment could be made, the enemy was swarming in the breach, the militia was palsied, and Armstrong's men were being forced back upon the second line where no guns were. Not twenty-five minutes had passed by since Long cried "Forward," — but the entire outer line, all the guns, and most of the militia were in the hands of the enemy!

Armstrong and Roddey united now, taking solid stand upon

the inner line. On pressed the enemy, leaping the guns. The Fourth United States Cavalry formed for a charge of the new position. On they came on the gallop, with drawn sabers — the whole regiment riding without a quiver into a withering fire of musketry that broke their charge. But they rallied at the very foot of the bastions and dismounted. Two other regiments hurried to their assistance in the fast gathering dark, and all three, supported by the scourging battery [1] that cut the breach for Long, now stormed the parapets, leaped down into the bastions, and cut into the quick of Forrest's men, while out of the swamp uprose the rest of Upton's troop spitting fire. All assailing the second line in full force, on front, overlapped Forrest on flank and rear. And now came the stampede.

Night fell, black as a catafalque. Friend struck friend and foe struck foe in the mad dark. Forrest, Armstrong, Roddey, and all their men that were left formed near the saltpeter works for one last charge. They were surrounded again, and had to cut their way out toward Beach Creek swamp and get away by the river road.

Over across Valley Creek, quick along the Cahaba road, and under cover of the dark, a long wagon train retreated, loaded with quartermaster's and ordnance supplies — all that was saved for the Confederacy out of Selma. As the teams under lead of Captain Huey of old Jonesboro were whipped up and rumbled along in the darkness, the stubble fields and clumps of woods in that vast level stretch of country began to glow with a savage light. Hour after hour, mile after mile, the red glow sped like screaming shells after them. At midnight they halted at the Cahaba ferry, and even then — ten miles away — every bush and tree stood etched in sharp black lines against the flaming sky that told the fall of Selma. The very links in the trace chains and the buckles on the mules' harness glittered like wild eyes. Captain Huey got his every team across the river in the dead of night under that weird light.

The burning went on and on — and beyond that burning city smoked the ruins of Oxmoor, Irondale, Tannehill, Brighthope, Brierfield, Shelby, and all the rest — the coal and iron business of Alabama, quieted now, it seemed forever.

[1] Chicago Board of Trade Battery.

CHAPTER XIV

RESURRECTION OF THE IRON WORKS 1866–1870

Irondale furnace in Jefferson County first plant to operate after Civil War. Patriotism of John T. Milner. Necessity for diversified industries driven home at last. W. S. McElwain and H. D. Merrill reconstruct Cahaba iron works. Detailed description of plant. Anecdote of "Boss" McElwain and little Dave Hanby. Coming of James Thomas of Pennsylvania. Abandonment of property. Present-day appearance of Irondale furnace site. Mary Gordon Duffee's experience in Shades Valley. Vision of old Oxmoor. Plan for reconstruction of furnaces. Daniel S. Troy strong advocate for iron business. Biographical sketch of Colonel Troy. Main events in Bibb County. Brierfield plant rebuilt. Organization of Canebrake Company. General Josiah Gorgas elected general manager. Technical description of Bibb furnaces. General Gorgas withdraws from iron world to take up the cause of education in the South. He succeeds Bishop Quintard as vice chancellor of University of the South. Last days of the chief of ordnance of the Confederacy. A return to Jones Valley. Anecdotes of the late eighteen-sixties. Early enthusiasts of Jones Valley: Baylis Grace, Major Peters, and John T. Milner. Daniel Hillman, Jr., visits region. Notes on early iron trade of Kentucky and Tennessee. Association of Birmingham Coal and Iron Company, and Republic Iron and Steel Company with old times. David Thomas, pioneer of anthracite iron trade in America, invests in Alabama mineral lands. First step in formation of Pioneer Mining and Manufacturing Company, nucleus of Alabama holdings of Republic Iron and Steel Company. Captain Danner's reminiscences of early coal trade.

THE first county to get upon its feet after the great cannonading was Jefferson; the first furnace, that of the Cahaba iron works, or Irondale, in Shades Valley. The plants at Shelby, Brierfield, Round Mountain, and Oxmoor followed in successive order, and certain other iron making enterprises were presently inaugurated in northeast Alabama by the Noble brothers and several officers of the Federal army.

Every plant in Alabama had been silenced by Wilson's hand, and the State's coal and iron business as well as her cotton business had been burned to the roots. Fully two thirds of the shareholders in the mining and furnace companies who survived were ruined in their personal circumstances. Every interest in the social, economical, and industrial life had been dependent upon an agriculture that now was paralyzed. The young men of Alabama lay in their graves.

Hundreds upon hundreds of families, long established in the country, were now packing up and leaving for the West. John T. Milner was one of those who lifted his hand to stay the great exodus. "We must bring labor here that will be effective," he declared, "or see our State given over to unthrift, idleness, and weeds, as has been the case in every other country in the world where slave labor once formed the basis of agricultural wealth, and was afterward set free." He thereupon set forth the need for foreign immigration, pleaded again for railroad enterprise, advocated trade with the Gulf, and pointed out once more the prospective value of the mineral region. He saw Alabama as she was, and did not hesitate to speak the truth. His patriotism was not "My country, right or wrong," but rather, "My country, may she pluck out the roots of her disorders and come to stand with clear vision, clean-limbed and progressive." John T. Milner's was not the vain apostrophe to Alabama prevalent among certain of his colleagues: "*Mother of sages and heroes, no stain dims your glittering escutcheon! Let your brow be lifted up with glad consciousness of unbroken pride and unsullied honor!*" Rather he faced the issues squarely. "Go to work," he cried to prostrate Alabama. "Let us now devote our energies to eradicating the diseases that are destroying us at home."

The wisdom of the argument that in diversified industries alone is builded the material force, the industrial hope, and the wealth of a State, was one of the lessons seared into Alabama by war's flame. The pioneer mining men and railroad men had long been saying this, but their prediction of commercial disaster, unless diversified industries were established, had sounded, however, as the prophecy of a Cassandra. The ordnance department of the Confederacy, as has been pointed out, gave the first immense, practical demonstration of what could be done in the mineral region.

Of the group of iron making enterprises just mentioned as starting immediately following the war, the account of those in Jefferson County will be followed by that of the Bibb County concerns.

The moment Wilson's raiders quit Shades Valley, W. S. McElwain, owner and operator of the Cahaba iron works, went north on a hunt for capital to raise his furnaces. He succeeded in procuring funds from an Ohio firm, Crane and Breed, of Cincin-

nati, and returned to Jefferson County, in November of the same year, 1865. He found the county officials in charge of his furnace ruins at Irondale, trying to protect what was left. Mr. McElwain's cousin, H. D. Merrill, and several other men formerly associated with the iron-master, now joined him. The company soon employed a force of five hundred men, cutting cord wood, burning charcoal, and starting the new works. They brought provisions in for many of the poverty stricken settlers of the valley, who were then drawing supplies at Elyton from the government. Their coming was a godsend to the country.

The new furnace went into blast early in 1866. Clothed in a stout, brick jacket, it stood forty feet high, was six feet wide at the boshes, and was lined with sandstone. It was located on the precise site of the former plant at the bluff's foot. The new tramway, fashioned of pine rails, climbed up grade to the top of the furnace hill; the ore loads were pulled up by mules, and the mine cars "or empties" rolled back to the ore dump by their own gravity. The furnace blast was forced by steam power, and the boiler, engine, and blowing cylinders were manufactured by McElwain on the spot.

The blast engine, the first in the county by the way, was 150 horse power, and the fly wheel alone weighed 36 tons. This engine was placed later at Woodstock in the Edwards furnace. Machine shop, foundry, commissary, boarding houses, employees' houses, negro quarters, stables, and corral were added to the Irondale plant. The furnace produced well. Her output was ten tons a day, and the quality of the iron used was good for small castings, domestic utensils, and for railroad use. The company furnished the old Selma, Rome, and Dalton Railroad (now a part of the Southern system) frogs, switches, and chairs for the rails. According to H. D. Merrill, the manufacturers got sixty dollars per ton for their pig iron. It was hauled by ox team, three or four tons to the load, down the Montevallo road to Brocks Gap, where it was loaded on freight cars, and was sent on down to Helena and Calera. The cost of labor per ton was eight dollars and the cost of transportation, all told, two dollars a ton. This was at the outset when Irondale was the sole furnace in operation, not only in Jefferson County, but in the entire State.

Mr. Merrill says further:

"When Irondale furnace went again into blast, it woke up the whole valley. Our Big Jim whistle, the largest whistle I

believe that was ever made, was also the loudest. We blew it night and morning and it echoed far and wide. The country people used to flock in from right and left, and there were crowds watching us most of the time. All the folks I met, even then in 1866, had no use for red ore other than to dye their clothes with it. They used to be so surprised when they saw us making it into iron right before their eyes. They got to thinking the land maybe had more value than they supposed all their lives."

"Boss" McElwain, as he was called, had considerable originative force as well as practical sense. He dealt in an upright way with folk, and his word was as good as his bond. Dr. George Morrow of Birmingham says: "Mr. McElwain was respected and looked up to everywhere. Had he not been so heavily handicapped, he'd have made a great success. He had courage and ability and he accomplished an extraordinary amount of work, for which he has never, to my notion, got full credit."

One early spring morning of 1867, Boss McElwain was riding up the old wagon road to the furnace, astride his big, dappled gray. Just as he struck the bridge he heard a shrill voice piping, it seemed, right out of the leaves of the big Spanish oak there:

"You ride a gray horse
And I ride a mule:
Beat me to Heaven
Have to get up in the cool!"

Boss McElwain drew rein. "Who's there?" he called.

A sturdy, black-haired, tough little mite of a bare-legged boy dropped down from the oak branch, poked his head from behind the tree trunk, and said:

"Have y' got an extry job, Boss McElwain?"

"What can you do?" asked McElwain.

"A sight of things," replied the youngster.

"How do I know that?" The boss looked down.

"Try me and you'll find out quick," responded the boy.

"What's your name?"

"John David Hanby, Boss."

"How old are you?"

"Eight year old, going on nine, Boss."

"Come along up to the furnace, John, and we'll see what we have."

Thus did John David Hanby, present superintendent of the

ore mines of the Sloss-Sheffield Company, get his start in the iron business. He had always been more or less around a blacksmith shop. His first recollection is of his great-grandfather, Andrew Jackson's own man, David Hanby, making a gun. His father, W. F. Hanby, after his try at the coal business, took contracts to supply a railroad camp near Helena with provisions and country produce. The failure of the contractor also involved Hanby and he went broke. His little boy, John David, who was born in 1858, at Mt. Pinson, at once set out to help. Having been drawn by the big Jim whistle over to Irondale furnace, little John David longed for work there, but he was afraid of Boss McElwain. He was so afraid of the big man that he shinned up the tree by the bridge when he heard the hoofs of the dappled gray. Hidden by the leaves, he had his say in his own quaint way, and won his job.

The time came before long, however, when Boss McElwain had to give up the fight. One misfortune after another attacked his business. Funds got low, and the price of iron fell. He could not see his hand before him. Tuberculosis seized him. In October of 1872 he entered upon negotiations with James Thomas to sell the property. He eventually tried railroading for a few years and then went into the lumber business at Chattanooga, where he died. His name will always be remembered in the history of the mineral development of the South. He is accounted among the master workmen of pioneer days as one indeed who had the grit and showed the way. Late in 1872, H. D. Merrill opened further entries at the old Ishcooda mines, later operating the Cornwall furnace for a time. Returning in 1880 to Jones Valley he became foreman at the Alice furnace, and later, purchasing agent for the Elyton Land Company. Under contract with the Sloss Company, eventually Mr. Merrill quarried the first dolomite ever used in the Birmingham district, this precise quality of flux being originally employed by this company.

Concerning James Thomas, a Pennsylvanian by birth, Mary Gordon Duffee wrote:

"Mr. Thomas came in the prime of early manhood, to help develop the mineral interests of Jones Valley when the gloom of war's destruction yet lingered over its fair face, and the task seemed hopeless. In manner he was plain and unassuming; in mind, intelligent and cultured. He labored with unwearied zeal for the establishment and promotion of Sabbath schools and churches. . . . His first term of service was as superintendent

of the Irondale furnaces, and subsequently the Eureka company at Oxmoor. . . . It was a constant and favorite remark of Mr. Thomas that he believed, when fully investigated and developed, Jefferson County would prove to be the richest county in mineral deposits in the entire United States. . . . It was to him all distinguished visitors were referred, and his statistics upon the ores form part of the most valuable of the tabulated data on that important subject."

The Irondale furnace was finally abandoned by Mr. Thomas, mainly on account of scarcity of timber. Together with Colonel Sloss he leased the Oxmoor plant in 1876. The Irondale property was eventually purchased by Joseph F. Johnston, one time president of the Sloss Company, and present United States senator from Alabama, and by him it was turned into a farm and orchard. All the machinery was sold to the Swedish sea captain, Charles Linn, for the Linn iron works (now owned by the Tennessee Company), and to the Louisville and Nashville Railroad shops. The old "big Jim whistle," screeching to-day as loudly as ever in Birmingham, is the only echo left of the old Cahaba iron works of Shades Valley.

One may visit the site of the old plant by motor flight. It is owned to-day by the Church brothers. "You all can't have been very long about these parts if y' don't know whar Church lives," it is said when attempt is made to trace the already forgotten trail. The car must be left on the main road — the old Montevallo road by the way — and one must press through weeds and briers shoulder-deep, scale a fence around stony pasture land, cross over the now bridgeless creek on a foot log and search for the tram track and the old wagon road. Winding into the very heart of the woods it goes, leading at last to an open sunlit space where once the commissary stood, near the stout masonry abutments of the little fallen bridge. The way is strewn all along with bits of iron and slag, and through the interlacing trees, frown the ruins of the old quarters. Beyond a little winding of Shades Creek is another open grassy space, closed in by tall trees, and at the far end shadowed by the bluff and the fallen stacks. The old furnace is but a shapeless mass of tumbled brick and rock and twisted iron rods. A long-leafed yellow pine waves from the topmast part of the old stack where once floated the smoke, its plume of industry. A slender sycamore and a sweet-gum peep over the deep well-like cavity. Frosty hoarhound flowers, strings of poke berries, and festoons of wild muscadine

drape it graciously, and, parting the vines, one may see where the molten iron and slag have enameled the brick and stone with myriads of colors as though set with strange, bright jewels. Like Cedar Creek, Old Tannehill, Eagle, Rob Roy, Brighthope, Brierfield, Chocolloco, and the others, Irondale, too, has been turned by nature and by time into a poem.

The other furnace plant in Shades Valley remained silent until the success of Irondale, during the years 1867 to 1870, at length brought a revival of interests to the blackened Oxmoor ruins, and a meeting of the directors and shareholders of the South and North (or Alabama Central Railroad) was held in Montgomery in the summer of 1871 to decide on ways and means of rebuilding the plant.

Oxmoor remained just as the Federal raiders had left it, in the month of April, 1865, "a scene of loneliness and ruin," Mary Gordon Duffee has chronicled, "that makes my soul faint to recall it." Miss Duffee, a young girl at the time of the war, had, at Oxmoor, an experience of deep and singular pathos. She was in Montevallo when the invading army entered. Her brothers were out in the field, and her parents were sixty-five miles away at Blount Springs.

"It was about set of sun," she writes, "when we heard the rolling of many drums and saw waving pennants and banners of war, and a seemingly endless column of cavalry approach the town. All night we waited the agony of the dawn, knowing a battle was imminent, as the forces of Forrest, Buford, and Roddey were on the southern outskirts. In the forenoon we heard firing at the depot, and a heavy skirmish began.

"Two days afterwards with the aid of Miss Emma Bailey I succeeded in organizing a little band of women and children, and we went down the railroad as far as Brierfield to search for the wounded, comfort the dying, and arrange for the burial of the dead. Having discharged my duty I resolved to make my way home on foot. Starvation reigned on every hand. After a walk of thirty miles, begging my nourishment of hominy and buttermilk from the ruined and wretched people by the way, I reached Oxmoor at the close of one of those tenderly beautiful days typical of early spring in this climate. I had renewed my fainting strength — faint indeed from hunger and the dreary walk — with the hope of receiving food and shelter in the dear homes of Oxmoor. As I neared the familiar scene, my heart sank at the strange stillness of the landscape, — not a sound save the call of the birds as they flew from limb to limb. Here and there an old army horse searched for the tender young grass; the wild honey-

suckle threw its spray of pink tendrils against the rocks; it was all so sweet and tranquil — but so overwhelmingly lonely! At last I mustered courage to venture on, and found myself standing amid blackened ruins against the wall of the furnace tower. Up the hill were silent, deserted houses; not a living human being was in sight. The awful truth flashed upon my mind, and in despair too bitter for words, blinded with tears, I knelt down and prayed my God for courage.

"Rising, I looked up at the summit of the high hill, whose sides had been utterly shorn of their timber, and I saw a comfortable building with smoke issuing from the chimney. This seemed a sign of inhabitants and security. Wearily I climbed the steep and rugged path, and arriving at the gate, told them who I was, begged a sleeping place on their floor, and assured them with all due humility and politeness that I would not presume to ask for food, only the charity of their shelter. The head of the family was a clever, kind gentleman, and son-in-law of old man Stroup, the pioneer iron maker of central Alabama, and the friend of my father and of my childhood. This family welcomed me, acted in the most hospitable manner, and compelled me to share the few supplies they had managed to save.

"Refreshed by a night of unbroken sleep, I bade these blessed friends adieu at an early hour and wended my solitary way to the wretched ruins. The morning sun shone from a cloudless sky, and I lingered long amid those mournful scenes; then pursued my journey up the street, past the silent homes, only one or two of which were left to greet me. On the summit I stopped to view the grave of a child of Mr. Haynes, a scientist. To my horror a wayfarer told me that stragglers from the army had broken the marble stones and dug into the grave in search of treasure. I hurried away. A couple of Southern soldiers passed me; they were my neighbors, and by them I sent a message to my father to meet me at Elyton. Hope arose in my heart, and soon I found myself at the door of Baylis E. Grace. I wish I had words to tell the gracious sweetness of his voice and manner as he led me into the presence of his young wife, an old Tuskaloosa friend of my childhood; how nobly they exerted themselves in my behalf; how freely they divided their food with me; how graciously the day passed."

Thus the ruins of old Oxmoor are pictured. On toward 1870, therefore, when plans to revive the iron works were under consideration, there was but the site to build on. The stockholders and officers and directors of the Red Mountain Iron and Coal Company and of the Central Railroad were mostly Montgomery men, among whom, besides Frank and William Gilmer, and Daniel Pratt, were A. J. Noble, R. D. Ware, M. J. Wickes, Cyrus Phillips, and David Clopton. This group of men was

reinforced by the lawyer, Daniel Shipman Troy, whose enthusiasm itself was an asset worth counting on. Colonel Troy had been interested in the iron making venture from the beginning, and had, in fact, through Colonel Gilmer, given to the place its Irish name of Oxmoor, several years before. The Troy family was of Welsh and Irish stock. The first one of the name to come across from Ireland made for North Carolina to help the patriots cast off the British yoke. After the Revolution, he settled in Columbus County, North Carolina, naming his plantation Oxmoor for the old country home. His son, Alexander Troy, for whom Troy, Alabama, was later named, served as State attorney of North Carolina. He married the daughter of a Welsh family, a young woman of exceptional education and personal force. After her husband's death she managed the plantation and the slaves, and bred her boys to the classics and to hard work. Daniel S. Troy was the youngest of this family of nine. In the midst of the spring plowing, the planting, and the wood chopping, his mother kept him and his brothers hard at Latin and Greek. By the time young Daniel was fifteen years old he was a scholar and also became manager of Oxmoor plantation. In his nineteenth year he set out for William Rufus King's home town, Cahaba, the old capital of Alabama, and began to study law in the office of his sister's husband, William Hunter. He was soon admitted to the supreme court of Alabama, married, and settled in Montgomery. By the year 1860, he was one of the foremost lawyers of the town; had served as State senator; introduced the railroad supervision law, officered the Montgomery water works and the Alabama Fertilizer Company, and had also founded a newspaper, *The Montgomery Dispatch.* His first wife died early and his second marriage was to Florence, the daughter of Thomas H. Watts, a governor of Alabama.

During the war Colonel Troy had a peculiar experience. Twice wounded in the Virginia campaigns, while he was lieutenant-colonel of the Sixteenth Alabama, under Longstreet, he was left on the second occasion for dead, on the battle field. On the point of being buried alive, he was rescued by the Sisters of Charity. "He was then carried to Lincoln Hospital," says his nephew, John London of Birmingham, "and he became then a convert to the Roman Catholic faith." For the entire remainder of his life Colonel Troy was devout in a profound and remarkable sense.

Upon his return to Alabama he at once set about doing his part to resurrect the railroad and iron making ventures up in the Red Mountain region. He made a personal survey of the company's properties, which was published in 1869, in *The Alabama Statistical Register*. The reconstruction of the Oxmoor furnaces was not accomplished until 1872, — after Birmingham was founded, — and Colonel Troy became president of the Company for a short term in 1876. He also served as attorney for the Elyton Land Company. Associating with him his two nephews, Alex Troy London and John London, he was engaged in law practice in Birmingham and Montgomery until his death, in the early eighties.

In tracing the reconstruction of the iron works at Brierfield, one finds back of the enterprise Brigadier-General Josiah Gorgas. The property was seized as contraband of war by the United States government, and was sold at public auction, in January, 1866. Honorable Francis Strother Lyon, a nephew of George Strother Gaines, factor of old St. Stephens, purchased the whole outfit. The Canebrake Company was organized, comprising Mr. Lyon, General Gorgas, Colonel James Crawford, Dr. Browden, —— Glover, —— Prout, and —— Collins. General Gorgas was elected superintendent and general manager, and T. S. Alvis, ironmaster. General Gorgas employed Giles Edwards, who had just then finished the reconstruction of the old Shelby furnace, to build the new Bibb plant "on the Pennsylvania standard." Mr. Lyon named the furnace for his mother who was Elizabeth Strother, close kin, by the way, to the mother of President Zachary Taylor, and to the Confederate officer, General Richard Taylor.

From an article describing these iron works, and written in 1868 by an officer of the United States Engineering Corps, these excerpts have been taken:

"All of the structures are of the most substantial kind. First, within one hundred yards of the railroad is the large rolling mill; within this there are three engines at work, one driving the 'muck train,' and intended also to drive the 'nail plate train,' a second which makes bar iron, and a third which pumps water, cuts off iron, and a machine for making buckles for cotton ties. Here are eight puddling furnaces, two heating furnaces, and four boilers supplying steam to the engines. The boilers are placed by the heating furnace, and the steam is made by the waste heat from those furnaces. The machinery all appears to work well, is placed on stone foundation, and is well disposed

for work. The puddling furnaces will convert sixteen gross tons of pig iron into muck bar in twenty-four hours, and these are daily converted into twenty thousand pounds of bar iron, and one hundred kegs of cut nails — the machinery for which is all on the spot, though not yet put up.

"Passing from the rolling mill to the shops, we find a foundry with cupola crane, ladles, flasks, etc., fit for work of almost every character; a machine shop with all the necessary machinery, driven by an engine of forty-horse power; a pattern shop and small brass foundry; a blacksmith shop; and attached to the machine shop is the building intended for the nailery. Around these are clustered offices, storehouses, spacious stables, and about thirty good frame dwellings, plastered and whitewashed, and looking very cheerful. A neat schoolhouse serves also as a church and for a Sunday school of about seventy scholars.

"In full operation these works would give employment to some three hundred operatives. On the opposite side of the railroad from the shops, and about one hundred yards distant, is a lime-kiln, with tram road leading to a stone quarry distant about three hundred yards. The kiln is of the kind known as 'perpetual,' that is, the burning and drawing go on continuously.

"Taking the tram road, which is substantially laid with iron, and going westward two and three-quarter miles, passing by the sawmill of the company half way out, where there are beautiful springs, and several dwellings, we came to the 'Strother [late Bibb County] furnaces,' called after Honorable Francis 'Strother' Lyons, well-known and beloved throughout the State of Alabama.

"Here in a pretty valley amid heaps of black cinders, stand two brick furnaces. The hot-blast furnace looms up with draft, stock, hot blast, engine house, casting house, and other appurtenances. Going into the engine house, up a flight of steps, you see a pair of large short cylinders, called 'blast cylinders,' driven by a strong engine. These cylinders serve as the bellows to a fire, and supply the blast by which the ore is smelted in the furnace. Another flight of steps upward leads to the 'bridge house' at the top of the furnace. Here the ore, limestone, and charcoal are weighed and measured, and fed into the top of the furnace. The engine goes on puffing ceaselessly, day and night, and the feeding of the furnace at the top never ceases. Twice in twenty-four hours the furnace is tapped at the bottom, and the iron runs out into a sand bed in shapes called 'pigs,' weighing about one hundred pounds each. The furnace is fed daily with forty tons of ore, nine or ten tons of limestone, broken up small, and twenty-five hundred bushels of charcoal, or, if coke be used, twenty-five or thirty tons of that, making the large aggregate of about seventy-five tons of material fed in daily. This is the limit of the capacity of the furnace and makes some twenty-two tons of iron daily, as the yield is something over fifty per cent of the ore used. The hot gases, as they escape from the top of the

furnace, are drawn off on one side under the boilers to make steam, and on the other side into the 'hot blast,' where the cold air, driven in by the cylinders, is heated to a temperature of about six hundred degrees, or to the melting point of lead. Alongside of this furnace stands the cold blast furnace, which has not been in blast since the close of the war. The hot blast furnace is forty feet high, eleven feet four inches in bosh (greatest diameter), while the cold blast is thirty-six feet high, and ten feet and six inches in bosh.

"In the rear of the top of the furnace, and side by side, are four brick structures which look like big ovens. These are for preparing charcoal. Into each of them fifty cords of wood are charged, and produce nearly three thousand bushels of charcoal. A cord of wood thus produces sixty bushels of coal, while in the ordinary way of burning it in pits the yield is only thirty to thirty-five bushels.

"Around these furnaces are collected the offices, stables, shops, and tenements of the company, straggling up and down in picturesque irregularity. The company has here a body of nearly seven thousand acres of land, on which there is excellent timber, and the ore spreads over five or six hundred acres in sufficient quantities to supply the furnaces for many a year to come. The ore is brown hematite, as at Shelby, and produces an iron of great strength.

"Bituminous coal of excellent quality is found in thick veins within three and a half miles of the furnaces, and has been opened out and used to some extent. A branch railroad from Ashby station, one and a half miles distant, on the Alabama and Tennessee Rivers Railroad, is graded directly by the furnaces and up to the coal fields. No work has been done upon it since the close of the war. There is little doubt but that when this branch road is opened into the coal fields (and Captain Barney, agent of the lessee of the Alabama and Tennessee Railroad, has expressed his intention of completing this important feeder of his road without delay), it will penetrate the finest coal beds in the State.

"The veins here attain the thickness of seven feet at a distance of eight miles from the junction, and Mr. Rainey of New Orleans has opened a vein of five feet thickness, within three and a half miles of the 'Strother furnaces.' . . .

"The Brierfield region is also very accessible. The Selma, Rome, and Dalton Railroad, running directly by Brierfield, is open from Selma to Blue Mountain, a distance of one hundred and twenty-five miles, and is now to be completed to Rome and Dalton without delay. At Lime station (Calera), this road is crossed by the South and North Railroad, leading from Montgomery to Decatur — of which about twenty miles are completed and in use. The road penetrates the Cahaba coal fields and the rich deposits of red hematite of Red Mountain. Two miles below Montevallo and three miles above the Brierfield Iron Works, a branch road,

two miles long, leads to the coal fields, where are the Montevallo, the Shelby, the Mobile, and the Selma mines. The last are worked by a company now known as the Central Mining and Manufacturing Company, composed chiefly of residents of Montgomery, of which Mayor C. G. Wagner is president. At Ashby station, forty-nine miles above Selma and two miles below Brierfield, a branch road is graded out four miles, and intended to reach the rich veins of coal lying between the Cahaba and the Little Cahaba rivers. Here are thousands of tons of coal already mined, waiting for the means to take it to market. Six miles of additional grading will reach the Cahaba, and one and one half miles more will reach coal veins five feet thick, already opened. Some of these veins make an excellent coke, of which a good deal has been used in the cupola at the Brierfield foundry."

Under the management of General Gorgas the Bibb works made pig iron and cotton ties in the interest of the Canebrake Company until the year 1869, when the plant was leased by Captain Alvis and operated by him as principal manager until 1873 when the great financial panic came on and iron went down so low as to make the manufacture of it unprofitable. The works were then closed down and remained idle until 1880. Subsequent operations will be detailed in a later chapter showing how four United States Senators — Morgan of Alabama, Plumb of Kansas, Morrell of Vermont, and Fair of California — became interested in this property.

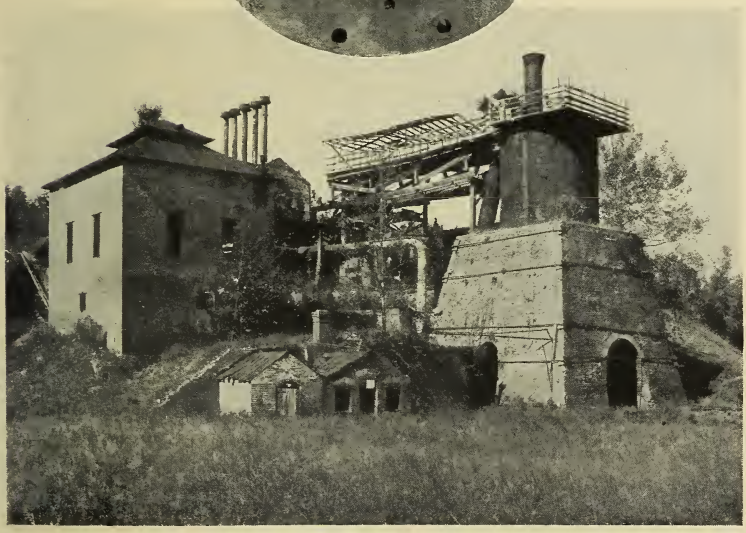
Brigadier-General Gorgas withdrew from the iron making business to accept appointment as first head master of the Sewanee Grammar School at Sewanee, Tennessee. From this time until his death he devoted his energies and interests to the promotion of the cause of education in the South. In 1871 he succeeded Bishop Quintard as vice-chancellor of the University of the South, whose records are so closely interwoven with the early history of the Tennessee Coal, Iron, and Railroad Company. General Gorgas helped to plant Sewanee on solid rock, then, in 1877, returned again to Alabama, to accept office of president of the University of Alabama. Greatly broken in health, however, he saw but few more years of action. He died at Tuskaloosa in his sixty-sixth year, honored and beloved. He was buried near Michael Tuomey's grave there. At the annual meeting of the board of trustees of the University, held at the old town, June 18, 1883, a minute of the death of Josiah Gorgas was adopted, part of which reads:

"A few weeks before the assembling of this board, a gentleman of distinguished character, of national reputation, of varied attainments, known in military and in civil life, and eminent in both, a gentleman who, when stricken with disease, was officially connected with the University, departed this life, and was borne from these classic shades to the place appointed for all living. . . . Suitable honors were paid his mortal remains; faculty, students, and a large concourse of citizens reverently and affectionately assisted at the last sad rites which committed his dust to earth to be commingled with the mother of us all. . . . It is not necessary to epitomize the career of General Josiah Gorgas; whoever has read the history of the war between the States, or is conversant with the events of those stirring times, knows what an important part he bore, and how well he discharged the great and important trust committed to him, and of his valuable services when officially connected with the University; how he brought order out of confusion, how he, almost imperceptibly as to the means employed, but most effectually as to results, established thorough discipline, and elevated the standard of morals and true manhood.

"General Gorgas was no ordinary man. . . . Let us hope that though dead, he may still speak, and have a noble fruitage in the well-ordered lives and good citizenship of many whom he taught."

A circumstance of especial interest and gratification to the people of Alabama was the granting in 1906 of a pension to the widow of General Gorgas by the Carnegie Institute. Not in any sense because of connection with the development work in the coal and iron makings of Alabama or because of General Gorgas' position as chief of ordnance, was the compensation accorded Mrs. Gorgas, but because of her own service of nearly forty years, as librarian and matron of the University of Alabama. Glimpses of her have been given in these records from time to time; first as a little girl in the governor's mansion at Tuskaloosa; as a young lady in the old house in Mobile; as a bride and mother in the cramped quarters of the historic Mt. Vernon Arsenal; then from post to post with her hubsand, until the return to Alabama. Wherever she has been, she has left behind her sweet influences. Hundreds upon hundreds of the boys and men of Alabama to-day call her "Mother."

Now to tread back again to the times when the Irondale furnace was under construction. One runs upon the figure of a man in gray, "a tall, fine looking man, with blistered feet, and his uniform in rags," as he has been described. He is Major Thomas



1. Ruins of Brierfield Rolling Mills
2. Last Relic of Iron Works of the Confederacy
3. Old Bibb Furnaces, Brierfield, Bibb County

Peters, formerly met at the arsenal in Selma. He was there through all the fierce battle. When the Federal soldiers marched out they left the industries numb, the town scorched and half in ruins, and the carcasses of hundreds of mules and horses rotting in the streets. Major Peters, full of the one idea of seeing the iron mountain of Jefferson County, laid his sword aside, and tramped across the desolate country. He reached Graces Gap, after many days, and Baylis Grace came out to meet him. "He told me he was worn out and tired and wanted to rest," writes Grace. "He said he had heard something about Red Mountain and wanted to see it. After a night's rest we went up on top of the mountain, and while standing on a twenty-foot bluff of red ore, he exclaimed, 'Here we rest.'" From that day, indeed, the major made his headquarters in Jones Valley. Red Mountain took him in thrall. He saw what he saw and he dreamed many things out of that vision. He and Baylis Grace became as David and Jonathan. Grace's home was his and all he had, for the major did not have one penny left. Miss Duffee records the incident of Major Peters' coming thus:

"Just after the termination of hostilities, when Rachel was mourning her dead and refused to be comforted; when veterans who had fearlessly faced the guns of a hundred battles were conquered by the woe in their own homes, and saw in life nothing seemingly worth the struggle; when gaunt poverty strode through the fenceless fields, and children were crying for bread; when birds found no harvests in which to build and sing; when the meal ran low in the barrel and barns were empty; when even heaven seemed very far away, a lonely sad-faced man walked into the valley, and, hammer in hand, climbed wearily the sides of Red Mountain. And he fell a-dreaming of the times now come upon us. Sustained by Mr. Grace, he wrote, talked, traveled, for years, until he had the attention of capitalists and secured their investments in mineral lands. . . . But the general laws of common sense and prudence that guided other men in their business dealings were entirely unknown to him, though honest and conscientious to the highest degree in all his acts. In person he was quite tall, perhaps six feet two inches; his complexion, hair, and eyes were dark; he had a pleasing cast of feature, and was a very good conversationalist, full of anecdotes and interesting reminiscences. But it was when engaged in his favorite topic of the mineral lands and their grand possibilities that he showed best his natural talents, and most favorably impressed, and even fascinated, his listeners. To this charm of manner and mind was added his great perseverance and force of will and action. He

never tired, but rushed everything he undertook. In religion and charity he was equally as earnest and successful. . . ."

R. H. Pearson also says that Major Peters had "the most kindly, lovable nature." Certain it was that he had a runaway zeal as well as a flowing tongue and pen when it came to mineral fields. As according to the old saying there ever stands at the base of a big thing the prophet, the dreamer, the visionary, so there now stood at the base of the Birmingham district, the first enthusiasts. One sees them very plainly: John T. Milner, Major Thomas Peters, and Baylis Earle Grace. As for James R. Powell, M. H. Smith, James W. Sloss, Henry F. DeBardeleben, Truman H. Aldrich, and their associates, they will be met in a few brief years, as the great pioneer builders in the period following the early reconstruction times.

Colonel Sam Tate, Daniel Hillman, Jr., and Colonel Enoch Ensley were among the men of the time to whom Major Peters wrote. Sam Tate's son, Sam Tate, says that his father got so many letters from the major about the wonders of Jefferson County that he finally came down "just to find out if Peters was lying, or was drunk, or else had gone clean crazy."

Daniel Hillman, Jr., was a son of old Daniel Hillman, builder of the Tannehill forge, whose story has already been recorded. Since those 1830 days young Daniel Hillman and his brothers had become successful iron-masters of Kentucky and Tennessee. In 1845 they had purchased the Tennessee rolling mills that had been established in Nashville in the eighteen-thirties by Robert Baxter, Henry Ewing, and E. D. Hicks. Steering all their machinery up river to their furnace plants in Lyon County, Kentucky, they rebuilt the mill on a much larger scale.

The quality of the rolled iron and the boiler plate they turned out became known to the trade the length and breadth of the country. Daniel Hillman was in charge of the celebrated mills, and joint owner, with his brothers, of the Fulton and Empire blast furnaces. He owned thousands of acres of mineral lands and more slaves than any other iron-master in Kentucky. The net profits of his iron business from 1855 to 1862 are reported to have amounted to $1,300,000.

Mr. Hillman had worked at the iron trade from the time he was a boy. In fact, he had helped his father at the ill-fated Valley Forge plant. He was born near these old works, near Trenton, New Jersey, in 1807. After the pioneering in Ohio he settled

down to steady work in Kentucky. First, at Greensupburg, he and his brothers assisted their father in making iron and shipping it by flatboat to Cincinnati. Then, in 1826, when he was in his nineteenth year, he managed the coaling and the office end of the steam furnace firm of L. S. and T. T. Shreves. Later, he went into partnership with William Wood in his forge and furnace plant on the Little Sandy River in Kentucky. While he was working here his good old father died at Tannehill. Then Daniel Hillman ventured into Tennessee. In 1833 he became a partner in the Cumberland Furnace Company, owned by W. A. Van Leer and John Sullivan. This furnace, located in Dixon County, had been built in 1817 by Montgomery Bell. It was the first plant in Tennessee to make hammered iron from pig. Several furnaces were built by this firm, among them Fulton furnace.

The Hillman brothers, now combining forces, started out independently, with the rolling mill project. Although Daniel Hillman lost heavily in the war, he was still accounted a rich man in the early eighteen-seventies. In addition to the fact that his father's last iron making venture had been in Alabama, Daniel Hillman had also become deeply interested in the mineral region of this State, through his friend Frank Gilmer. Colonel Gilmer, indeed, had once shown Mr. Hillman some of the specimens of iron ore that he had picked up on that memorable horseback ride away back in 1833, over Red Mountain. Then, too, Sam Tate and Major Peters had written him to come and see the place.

Mr. Hillman was an old man when he got his first view of Red Mountain along in the late eighteen-sixties, but he found the place what it had been said to be. He rode on horseback along the crest of the great iron ridge. At the point where Redding Mines (owned to-day by the Republic Iron and Steel Company) were later located, the old iron-master got off his horse to take, with indrawn breath, a longer look.

"Here is the very spot," he turned to Major Peters and Colonel Tate, "the very spot," he cried, "most favored for iron making in the world!"[1]

Major Peters had no further trouble in making a deal. Mr. Hillman invested largely in both coal and iron ore lands, and returned then to his home in Kentucky. He lived but a short time after this. To his son, Thomas Tennessee Hillman, he bequeathed

[1] Jefferson County Record.

his interests and his hopes in the Birmingham District. A portion of the ore mining properties Daniel Hillman purchased at this early date is owned to-day by the Birmingham Coal and Iron Company and operated under the name of Songo.

Coincident with Daniel Hillman's visit to Jones Valley was that of David Thomas of Pennsylvania, "the pioneer of the anthracite iron trade of America." The celebrated old ironmaster, together with his son, Samuel Thomas, and his grandson, Edwin Thomas, came south first at the instance of his old friend and fellow-countryman, Giles Edwards. At the old inn in Elyton, they met up with Baylis Grace, whom they employed as their agent. At this date (1866–1869) nothing beyond the purchase of mineral lands by Giles Edwards, near Tannehill, in the name of Samuel Thomas and Robert H. Sayre, was accomplished. But this was the first step in the making of the Old Pioneer Mining and Manufacturing Company, which was the foundation property of the Alabama holdings of the great Republic Iron and Steel Company. Operations were not begun until the eighteen-eighties. Another Pennsylvanian visitor of this early period who did much to arouse interest in the mineral region, was William D. Kelly, known as "Pig Iron Kelly."

Some interesting recollections of the coal business of the State at this particular time have been contributed to this work by Captain A. C. Danner, president of the Mobile Coal Company, as follows:

"About 1870 my firm was handling in a small way for domestic purposes Pittsburg coal which came down the Ohio and Mississippi rivers to New Orleans, where he bought it and then transported it from there to Mobile in small schooners. There was no railroad at that time between Mobile and New Orleans, and that coal we usually retailed at from $12 to $14 per ton, when we first began to sell it here. We also occasionally brought over from England some hand-picked English Cannel lump coal, which we retailed here at from $20 to $23 per ton.

"Montevallo coal was the first Alabama coal that my firm brought to Mobile. We have continued handling this coal up to the present time, 1909. I think the price of this particular coal is about the same now as it was then, but there has been a great change in railroad freight rates. My recollection is that we paid the first year or two that we handled Montevallo coal $3.50 per ton, freight, while now the railroad rate from the same mine to Mobile is $1.10 per ton. The high railroad rate on this coal caused me to look into the matter of water transportation for it. I went around to Pittsburg and investigated the barge and tow-

boat business there, and bought the stern-wheel towboat 'Mollie Gratz,' which had been used on the Ohio River for towing coal. I brought her round by way of the Mississippi River, New Orleans, and Mississippi Sound to Mobile, and sent her with two barges up the Alabama River to Selma, had her loaded with Montevallo coal and brought back to Mobile at a cost very much less than the railroad would have then transported the coal for; but after making two or three trips with this boat I found that we had greatly overstocked the market, the consumption of coal in Mobile then being very small.

"A year or two after this experiment with the 'Mollie Gratz' I went up to Tuskaloosa and arranged to mine some coal on the banks of the Warrior River, the property belonging to the Alabama insane hospital. Accordingly, I employed two young English miners, named Spencer, to mine this coal, and sent up a man from Mobile to build barges. He built several. I had them loaded with coal mined on the banks of the Warrior River, and held them there until the river rose, and then floated the barges down to Mobile without the aid of a towboat, having a crew on each barge, and letting them float down with the current. My firm brought down to Mobile five or six barges of coal in this way. My recollection is that we lost one barge by sinking, but we succeeded in bringing enough coal this way to demonstrate the feasibility of floating coal down by water. This was before the government made any improvements on the river; but we found that this venture, as with the one from Selma, proved that the demand for coal in Mobile was not sufficient to justify this business; besides, the coal from the Warrior River was too soft and fine for domestic purposes. At that time there was no demand for steam coal in Mobile.

"I remember that the spring following the one when we had brought coal down from Tuskaloosa, some of the natives living above Tuskaloosa built some barges, loaded them with coal, and floated them down to Mobile. My firm bought the coal from those men. Those natives, however, did not continue in the business. My recollection is that they were out from their homes above Tuskaloosa, nearly a month, floating lazily down the rivers before they got to Mobile. At the time alluded to above there were no ocean steamers coming to Mobile. All the trans-Atlantic business, mainly shipment of cotton to Europe, was done by sailing vessel, and these vessels loaded in lower Mobile Bay, some twenty-eight miles from the city, because there were only nine feet of water over the bar up to the city. There was the Morgan line of steamers running to New Orleans, but they burned pine wood altogether, as did the tugboats and other harbor craft.

"There were no factories in Mobile then, the cotton presses being about the only important concerns run by steam, and they burned wood, needing no coal whatever. Later on the United States government began to deepen the water from the Gulf to

Mobile City, soon increasing the depth to thirteen feet, and then to sixteen feet, and afterwards to twenty-three feet, the present depth.

"With the increase of water to the city, foreign steamers, at first quite small ones, began to come up to the city to load, and with the advent of these steamers the real coal business of Mobile began, and has increased steadily year by year since that time with the increase of steamer traffic. About 1872, perhaps, my firm discontinued handling Pittsburg coal and foreign coal, confining itself entirely to Alabama coal, although there was very little of it being mined at that time, but sufficient for the demand, even the railroads, as a rule, running their locomotives with pine wood for fuel."

CHAPTER XV

THE FOUNDING OF A GREAT WORKSHOP TOWN, 1869–1872

Events of South and North Railroad. "On to Nashville!" Frank Gilmer again at the front. Carpet Bag legislature in control. Submersion of State enterprises. Crisis in railroad history. Construction work on South and North begun. "Build that road cheap." John T. Milner's vision of a city in Jones Valley. Options taken up. Agreement with John C. Stanton, president of Alabama and Chattanooga Railroad. Treachery of Stanton. Baylis Grace brings news. A great game afoot, "but the end is not yet," says Colonel Milner. Suspense of the moment. Josiah Morris takes up options for site of Milner's city. Organization of Elyton Land Company; articles of incorporation; election of James R. Powell as president. Naming of the new town. Biographical sketch of Colonel Powell. "His nose told on him . . . he'd fight a legion of devils." Days of the pony express in Alabama. Pioneer transportation methods. Preliminaries for laying out of Elyton Land Company's city. Reminiscences of Henry W. Milner. Colonel Powell's enterprise. Captain Charles Linn one of pioneer investors. First bank established. "Linn's Folly." Association of Tennessee Company property with old sea captain's ventures. Major Willis Milner appointed officer in Elyton Land Company. Giles Edwards passes through Jones Valley. The city in the corn fields. How "the old co'thouse" was wrested from Elyton. Sketch of Robert H. Henley, first mayor of city. Colonel Powell's startling methods. Building of the Old Relay House. Introduction B. F. Roden, R. H. Pearson, and Frank P. O'Brien.

TO take up again the thread of the South and North Railroad history, broken for the time by war and all its sorrows, it is seen that it now becomes closely knit and interwoven with every circumstance and incident of Jefferson County. And very soon, indeed, the biggest piece of business which has yet been chronicled in these pages comes to pass. It seems that the first legislature convening after the war, passed a State aid law, the main object of which was the building up of the mineral interests of Alabama. Colonel Gilmer came at once to the rescue of the South and North Railroad. "His millions were gone," says Milner, "and Frank Gilmer was a poor man, but before the hot embers of his grand conception in Jefferson County had cooled, men were at work securing and saving what was left. Collecting his scattered forces and unfurling his standard with his watchward 'On to Nashville,' Frank

Gilmer again began the work of reconstruction. Though our strong men had gone to the wall, and our stockholders could not pay, a few of us kept our chartered interest alive." The first foothold was thus kept. But when the reconstruction laws of the Federal Congress were passed, in February, 1867, the ground became quicksand.

The Carpet Bag legislature appeared at the capitol at Montgomery, in June, 1868, and John C. Stanton, of Boston, with it. "Stanton was a hard-looking Scotchy fellow," observed Kevin St. Michael Cunningham, "a red-headed, hustling rascal."

According to Milner this Stanton controlled the legislature in so far as railroad affairs were concerned, "as if he owned every member, body and soul. He secured the gift of all that had been done by our people in grading the road from Meridian to Chattanooga. He wanted more and he got it from the legislature." Frank Gilmer and his associates went under. Stanton and his crowd were on top. "No one knew what would come next," says Milner. "The blight was on everything except the souls of our people, and the soil we lived on."

John Whiting, a Montgomery cotton factor, was made president of the South and North Railroad, displacing Gilmer. "I was still the engineer, so called," said Milner. "The Central had a mortgage on the Alabama and Chattanooga Railroad, but it was in the name of the State. I soon saw that Stanton, by a single wave of his hand, could do away with that mortgage, and all others, of which we were the beneficiaries, under the Act of 1859–60. I told Mr. Whiting he had better watch these matters of legislation. He spurned the idea of getting among these Yankees at all, much less of paying them for their votes, but he said I might do so if I felt like it. I had then been engaged in the work of building this railroad for over ten years, and my heart and soul were in it. So I went."

John T. Milner thus saved the State's appropriation for his railroad. While the young engineer was at the capitol, Stanton proposed to turn the course of the line as located by Milner, and go no further than Elyton, and there make connection straight for Chattanooga. The idea struck Whiting as an excellent one — for cotton. Montgomery, then, as now, was in the main a cotton market. She would by this arrangement get a competing commercial line to New York. As for any mineral regions in Alabama, "the thing was mainly talk after all. Alabama was a cotton State."

John T. Milner's temper got up. "I saw at once," he relates, "that this meant the ruin of our great railroad enterprise forever, and the transfer of everything to Chattanooga, an irretrievable loss to Alabama." He went to E. C. Hannon, the one man in Montgomery who had influence with Whiting. Mr. Hannon was a Georgian, and a good square sort, with sound judgment. With Milner he saw the danger, and turned in at once to try to avert it. But Whiting was stubborn. He wanted what was good for cotton. "The matter went far enough," said Milner, "to require me to turn over all the profiles and maps I had made to Stanton's chief engineer, Major R. C. McCalla."

A halt for the moment was called on the proceeding by Whiting's receiving another proposition from Williard Warner, also good for cotton. He went up to Washington, reflecting over the two, and died there quite suddenly, without ever coming to a decision.

A meeting of the directors of the railroad was called in Montgomery the following week. Milner writes: "Suddenly and without premonition, Frank Gilmer — this ghost of a man who was thought to be forever lost — appeared at the board in November, 1869, with proxies for a majority of the stock in his hand! The scenes at the feast of Belshazzar most fitly describe what happened in that room when this revelation was made. Gilmer was again elected president." The men went fairly beside themselves.

The little construction work that had been accomplished during the war consisting of strap rail and stringers, was all but obliterated. The South and North was no more than a scent up through the pines to the borders of the Hill Country. Milner and his associate engineers, among whom were his cousin, John A. Milner, and also N. W. Long, J. T. Elmore, and R. B. Harris, with the railroad contractors in their wake, then began construction work.

"According to the terms of the contract of April 12, 1869, Sam Tate agreed to furnish all the material of every character, to construct the entire road from Montgomery to Decatur, according to the plans, lines, and grades designed in Milner's report of November 24, 1866. He agreed to deliver the road, fully equipped with rolling stock, machine shops, roundhouses, depots, section houses, water stations, etc., and he stipulated to finish said road from Calera to Elyton by April 1, 1871, and to Decatur by December of that same year, all for the sum of

$5,014,220, the three and eight per cent bonds indorsed by the State to the extent of $16,000 dollars per mile." [1]

Under orders to build that road as cheaply as a railroad could be built, "and more cheaply if possible," the engineers made long detours, climbed hills, and wound in rattlesnake curves, avoiding all tunneling, trestle-making, expressive grading, anything, everything, to save money. For the treasury was lean indeed. Milner would come back from Montgomery saying, according to his son, "More curves, more curves, more stiff grade." And he and his engineers stood for it as best they could. It cost the Louisville and Nashville Railroad a fortune, in later years, under M. H. Smith's lead, to undo this railroad work ordained by an enthusiastic but short-sighted and poverty-ridden company.

Only Sam Tate and John T. Milner and his engineers foresaw the freight that road was destined to carry, and how the burdened trains would have to labor and struggle and burn good money in after time. John T. Milner's wife, who, by the way, was the daughter of John C. Caldwell, knew a great deal about engineering. She used to say as she looked over the loops and the stiff grades, "Well, that was not the way my husband planned it, nor the way he wanted it. It was the way he just had to make it."

Construction work had not been long under way when John T. Milner proposed to Stanton, as president of the Alabama and Chattanooga (now the Alabama Great Southern), that they buy jointly, in behalf of their respective companies, a big tract of land at the point their railroads should cross, for the purpose of founding an industrial city.

This idea of some big workshop town at the heart of the mineral region to become of permanent use and value to Alabama had been stirring in John T. Milner's mind for years. He did not see why it could not be. He and Sam Tate used to talk it over together in the camp, of nights, smoking pipes around the fire beyond their tents under the long-leaf pines.

Just as the vision of a railroad through the iron and coal regions had haunted Frank Gilmer, asleep or waking, so now the dream of a great city stood insistent before John T. Milner and gave him no rest. Years before he had seen just the place for it, when he had ridden along the crest line of Red Mountain. It was on rising ground in the long valley, near a place of many springs; a

[1] Tate contract loaned by M. H. Smith, president of Louisville and Nashville Railroad.

happy, comfortable farming life, giving light and motion to the green world lying in and around the village of Elyton.

The Alabama and Chattanooga directors had at one time considered making a town at Oxmoor, but Stanton at length favored Milner's proposition. An agreement was drawn up between the two men, signed and sealed. In his mind's eye, John Milner saw his city rise up in the woods of Jones Valley and take form and shape.[1] He got the precise site he wanted. With Stanton's chief engineer, he took up options on nearly seven thousand acres of ground in Jones Valley, near a stream called Village Creek. There were fifty-three springs on the tract, and the engineers located a canal into which Village Creek could be diverted, and therefore got the first necessities for a town, — water facilities and perfect drainage. When the options were all secured and the site was surveyed the engineers located both roads to Village Creek and construction began. They moved the camp up to Alfred Roebuck's place, and for the next few weeks were hard at it staking out the boundaries, the section lines, streets, and blocks.

At daybreak, one morning in April, when Milner and McCalla were just about turning out of their tent, Baylis Grace rode up to Roebuck's with news. He said construction work on the Alabama and Chattanooga had been stopped over McCalla's head by Stanton's orders; that the line was being run towards Elyton instead, and that Stanton had taken up options on all the farm land in Jones Valley near and around Elyton, and had backed out of the Village Creek agreement, together with all the directors of the Alabama and Chattanooga.

The news came sudden and sharp as a pistol shot. John T. Milner seldom became angry. When he did he turned sheet white, and never uttered a word. Major McCalla, too, was dumfounded. Grace turned to Milner. Speaking of it years afterward, Milner said, "He asked me what it meant, anyhow. I did not have anything to say. The infamy of the thing paralyzed me for the moment."

Major Tom Peters came galloping up just then with two or three others. They were all up in the air over the thing. "The options Stanton had taken," some one said, "were for sixty days, payable at Montgomery." John T. Milner glanced up. Captain

[1] "He had always a rather curious and remarkable dream sense," his young granddaughter, Bessie Milner, says; "he could visualize strangely, and see things in the dark."

Alburto Martin at that moment rode into camp and dismounted. All had heard of it by "farm telegraphy."

But Milner and McCalla did not discuss the matter. They could not give entire credence to the thing without some notice from headquarters. Both engineers dropped a line to Chattanooga requesting information, and protesting against the change. Then they took up their day's work again and went on platting out the city at Village Creek.

A week went by with no answer. There never was any answer, nor indeed, was there need of one. The facts themselves spoke. It was a shrewd business trick by which the directors and stockholders of the South and North Railroad were knocked out of any share or chance of share in the lots of the projected city; the directors and shareholders of the Alabama and Chattanooga had the whole thing and would own the town. The South and North was marked out for defeat and bankruptcy. It was a great game but the end was not yet.

The Montgomery end of the road was at its wits' end. What to do, neither Colonel Gilmer, nor Daniel Pratt, nor any man of the company could advise. Milner shouldered the business alone. In a leisurely way he began locating new lines for the crossing. In the ensuing three weeks, with an occasional trip to Montgomery, he located between fifteen and sixteen different crossing places at every available point above and below Elyton.

From Stanton's point of view, the confused engineer evidently could not make up his mind. There was nothing for Stanton and his crowd to do but to wait until he did. Until that crossing was located everything was at a standstill. Stanton knew, as everybody knew, that there was no money in Alabama after the war. As to the options they felt safe; that was a side matter. Captain Alburto Martin however felt a call, being by profession a lawyer, to look to the interests of the Jones Valley people, who were his kith and kin. He therefore went to work and got possession of the deeds to Stanton, and held them in escrow.

As the date for the expiration of the options approached, Captain Martin, heading a delegation of the landholders, went down to Montgomery. To all appearances John T. Milner took no interest in this option business; he just kept on locating crossings, making a new one every day. Not a director or a stockholder in the company could get two words out of him.

The sixtieth day was at hand, and no funds had yet been placed

at Josiah Morris' bank by Stanton. On the morning of the second day of grace John T. Milner casually dropped into the South and North office at Montgomery. Meantime Major Campbell Wallace had run over from Atlanta. He asked, as every other South and North Railroad man was asking, "Milner, where is that crossing going to be?" But Milner made no reply.

The third day of grace, December 19, 1870, dawned. No word had come from Stanton, or from a single man of the Alabama and Chattanooga crowd; neither were there any funds from Boston or so much as a sign of any. Just about noon of this last day John Milner strolled into the Morris bank. Captain Martin and the Jones Valley landholders were gathered in the lobby, and in no easy frame of mind.

Precisely on the minute marking the close of the time allowed within the law, Josiah Morris himself sat down on the cashier's stool and handed out to Captain Martin the cash for the first option, for the second, the third, and so on, till one hundred thousand dollars in cold cash was handed out of that window, and four thousand one hundred and fifty acres of land, the whole site for John T. Milner's town, bought in the name of Josiah Morris.[1]

All of the men interested in the big purchase then gathered at the bank, formed a realty company, and drew up a declaration, which was filed in the probate court of Jefferson County the following day, December 20, 1870. This read:

The State of Alabama, Jefferson County. To the Probate Judge of said county: The undersigned respectfully represent unto your honor that they have formed an association for buying lands and selling lots with a view to the location, laying off, and effecting the building of a city at or near Elyton, in said county, in which county the business is to be carried on, and are desirous of being incorporated.

[1] Josiah Morris was born in 1818 on the eastern shore of Maryland. He left for Georgia at an early age and engaged in the mercantile business, going later into the cotton trade. In 1852 he located in New Orleans where he made what was then considered a fortune. In 1856 he settled in Montgomery, Alabama, and opened a private bank. He was interested at one time in the Montevallo Coal Company. His financial assistance to John T. Milner at the critical point made possible the founding of Birmingham, but he was not himself, as so frequently stated, the founder of that city. His loan was in the nature of a personal favor to Colonel Milner, and he was eventually relieved of his purchases in Jones Valley by the Elyton Land Company. Of the 20,000 shares of stock he originally held he reserved only 500, assigning the remainder to the company. The Morris Hotel in Birmingham is named for him.

And for that purpose attach hereto a declaration in writing, as required by law.

The undersigned apply for a charter, and to be incorporated under the general incorporation law of the State of Alabama.

Josiah Morris	J. N. Gilmer
J. R. Powell	B. P. Worthington
Sam Tate	Robert N. Greene
Campbell Wallace	W. F. Nabers
H. M. Caldwell	John A. Milner
Bolling Hall	Wm. S. Mudd

We, whose names are subscribed to this declaration, do hereby declare and make known for the purposes aforesaid as follows:

1. That said association shall be known by the corporate name of the "Elyton Land Company," and the object for which it is formed is, the buying lands and selling lots with the view to the location, laying off and effecting the building of a city at or near the town of Elyton, in the County of Jefferson and State of Alabama.

2. That the amount of the Capital Stock is $200,000, which is divided into two thousand shares.

A second meeting was called shortly after New Year's Day. Then on January 26, 1871, the incorporators again met at the Morris bank and elected James R. Powell president, and formally transferred the Jones Valley property bought by Josiah Morris, at Milner's instance, to the Elyton Land Company. By-laws were also adopted and a name for the city was decided upon. Milner, it seems, had thought of everything except the name.[1] A suitable name was suggested by Josiah Morris, whereupon there was unanimous approval and the following clause was at once inserted in the by-laws: "The city to be built by the Elyton Land Company, near Elyton, in the county of Jefferson, State of Alabama, shall be called Birmingham."[2]

Thus it was that the little town destined to become the railroad center, the great coal depot, and the main headquarters of iron

[1] "When this good town of Birmingham was organized," Truman H. Aldrich says, "there was a great discussion as to the name that would be given it. Some suggested calling it Powellton after Colonel Powell, at the head of the Elyton Land Company; others wanted to name it Milnerville or Morrisville. Mr. Josiah Morris objected very strongly to those names, and, looking out of the window, said there was a distinguished citizen who was a native of an adjoining town whose name would be particularly appropriate, and to name it after Judge Mudd and call it Muddtown. As a matter of fact, nothing could have suited the place more at that particular time, and indeed for a good while later! The town just missed it!"

[2] There was at the time one little village in northeast Alabama also named Birmingham, but beyond its name on Michael Tuomey's old map, it had no further character.

and steel making of Alabama and of the whole South, was named for the seat of iron manufacture in the mother country, Birmingham the best workshop town in all England.

From that day the realty company that sprung thus, full armed as it were, out of the brain of John T. Milner into the midst of the bewildered little company, took leadership at once upon itself.

In addition to John Milner's definitely pointed plan there were the reinforcements of Josiah Morris' bank, and the lively and energetic personality, the brains, and capital of James R. Powell.

As for Powell, he became a central figure at this turn of events — a decided character and influence. He was a six-footer, they say, with shoulders broad as a jockey's and his body was long, narrow-built, and raw-boned. He had a thin, keen, clean-shaven, ruddy face with thick, cotton-white hair, a strong, prominent nose, sharp, gray eyes, and a square jaw. "He was argumentative and dictatorial," notes Kevin St. Michael Cunningham; "his nose told on him, y' know. He 'd break everything his way, 'd fight a legion of devils, y' know." Odd to say, he was not a Tennessean, but a Virginian. His first essay at earning a living had been as an assistant teacher in the Lowndes County Academy, a vocation for which he was eminently unfitted, according to all accounts. Before his twentieth year, however, he gave up his books, and astride his own little mare, made for the new, wide South. Just as Frank Gilmer rode into Alabama, and about the same time(1833), Jim Powell finally reached the town of Montgomery, with no assets beyond twenty dollars in cash, his gun, a bag of salt and meal, and the little mare.

He took any job he could get, and was finally forced to sell the little mare. He tried one thing and another, and at length he took a contract as mail rider for the government on the pony express established between Nashville and Montgomery, during Andrew Jackson's administration.

Up to the late eighteen-thirties this was the method of mail service in Alabama. The speed averaged ten miles an hour, and at the finish of each ten-mile course, relays of fresh horses of the best blood waited the carriers. Those boy riders were the heroes of the road; James Powell rode fine and wild like Bill Weatherford. All along the old Huntsville Pike, when children heard the sound of a galloping horse they would tumble, breath-

less, to the road's edge to see him riding by. And often in the dead of night, Baylis Grace has chronicled, the early settlers of Elyton and Jonesboro would be startled out of their sleep and wake to the sound of the pony express passing like sudden thunder.

One of the boys who rode the route along with Jim Powell was a young fellow by the name of Jimmie Pugh whose father and mother had died, leaving him to shift for himself. They had brought him into Alabama in 1823 from Georgia. The boy carried the mail route, three days in the week, and put himself through school with the wages he made at that. He went up the ladder, round by round, and eventually became United States senator James L. Pugh. He obtained the first appropriation for a lock on the Warrior River, and is frequently referred to as "the father of the water-way improvements of Alabama."

When the express was abolished, Powell started a mail coach line of his own. He also began to make investments in cotton lands with his savings and to take a hand in politics. He was a born speculator, and, like most Southern men, a born Democrat; he made business, as he made life, a series of adventures. Precisely twelve years from the time he entered the State and had to sell his little mare, he was elected to the State legislature from Coosa County, and became "Colonel" Powell and was a large landholder. He later served two terms in the State senate. William Garrett in his "Reminiscences of Public Men in Alabama," says:

"Colonel Powell was a shrewd, practical man. He often addressed the House in a brief but very sensible manner, in behalf of or against any measure, as he might think proper, and as his judgment dictated. He was active and useful on committees, and in the general despatch of the public business. His suggestions always denoted a closely observing mind, and a rare degree of penetration."

He retired from the political forum, however, to concentrate upon ways and means of whipping Robert Jemison of Tuskaloosa out of the mail coach business; for Jemison's competing line was by this time becoming Powell's most formidable rival. Robert Jemison, it seems, had outlined a similar policy against Powell. Each then ran the other to the verge of bankruptcy, and at length they were forced to consolidate "to save the fur." The Jemison, Powell, Ficklen, and Company stage line was then organized, and traversed every pike and highway through north

and central Alabama until the incoming of the railroads. Following the war, in which he took no part beyond manufacturing ice gratis in 1863 for the Confederate hospitals, the colonel started a big colonization scheme down on the Yazoo River in Mississippi; he planned the making of a cotton world where he might rule like a shah. He toured Europe in 1869 and 1870, returning to Montgomery in time to help Milner do up the Yankee Stanton and his Alabama and Chattanooga crowd.

The colonel had the iron ores of Red Mountain analyzed by experts, the coal seams tested and proved, and limestone quarries opened. He learned that building stone, marble, clay, and brick were all in easy reach, and demonstrated, in fine, that if railroads once crossed the section, there would be the making of a city in Jones Valley, such as could be found nowhere else in Alabama, or, indeed, in the South. He saw in it a business venture worth his mettle, worth his time, and worth his money, something, indeed, "with millions in it." His enthusiasm more than matched John Milner's.

Preliminaries for the laying out of the town in the stubble field were then discussed by Milner and Powell; the various details for the streets, parks, schools, churches, and railroad reservations. "These reservations are gone now," John Milner wrote in 1886, "and in a short time there will be difficulty in railroads passing through the city. I had from the beginning determined to locate this town nowhere unless a large area of ground was owned and controlled by one company. Although I had been looking to this thing for years, I had no conception of its present grandeur, nor did any one else, for the minerals which gave value to Birmingham and the country surrounding it were not developed until 1879, nearly nine years after the city was founded."

Another contract was drawn up with Sam Tate and his associates to complete the South and North Railroad. Milner and Powell left Montgomery for Birmingham. The plan of the city had been agreed upon by the two men and the whole thing was now on paper. John T. Milner returned to the Birmingham Camp. The railroads, such as they were, had driven out the mail coaches. To get to Birmingham, Milner, taking with him his little boy, Henry Willis, rode on the South and North from Montgomery to Calera, then on the Selma, Rome, and Dalton Railroad up to Chattanooga, where they met Colonel Powell, and proceeded to Birmingham.

"I remember we spent three days riding all over the ground on horseback," says Henry W. Milner. "Cousin John A. Milner, who was living then at Elyton, loaned father a couple of his horses, and I rode behind Colonel Powell. The place was cleared of stumps and trees, but not under cultivation at the time. It was just an old cornfield, all overgrown with weeds and briers. There were a couple of Alabama and Chattanooga section houses alongside the railroad tracks [where the Crane Company's warehouses are to-day]; that was about all I could recall seeing. There was a swamp down by what is now Powell Avenue where they had a rabbit drive just a while before and caught seventy-five rabbits. That made a great impression on me. I never saw anything like the rabbits. Every step our horse took, seemed to me, a rabbit would start out of the ground. Colonel Powell would turn around each time and say, 'Henry, there 's that same rabbit following us every step we take; you can tell he is the same one by that white tail he 's got!' And I would look and look and try to figure out how one rabbit could get to be in so many places and look like so many other rabbits all at the same time. It kept me right busy figuring."

Powell and Milner at length settled on the main points of the town, and Major William P. Barker began running the lines. Captain Martin gave to the young town the name "Bucksnort," and wrote many a column in the Alabama papers laughing the place out of countenance. He even detailed the Milner *vs.* Stanton episode in biblical fashion, starting out, "Now, John, the son of Stanton, did unto John, the son of Milner," etc. Major Barker kept along with his transit work meanwhile, and Colonel Milner, Colonel Powell, and little Henry went back to Chattanooga to see Stanton. But Stanton was gone.

Returning to Jones Valley Colonel Powell took up his quarters in one of the Alabama and Chattanooga section houses. He personally superintended the work of laying out the town, had the map recorded, and the streets dedicated to the public. To get building material to the spot quickly, he made arrangements with a Montgomery contractor to make brick on the Elyton Land Company's property, agreeing to pay for them as fast as they were burned, and to supply them at cost to the builders as they were needed. The work had progressed far enough to the colonel's eye to have a public sale of lots, and the event was set for June 1, fully six months before the city charter was granted, and advertised by Colonel Powell throughout the State. Although the A. and C. track was laid by and beyond the projected town, it had not yet got in its rolling stock. The mail coach line was extinct, and the

South and North was still having troubles. Nevertheless, on the first sale day the people came in droves. They rode in on horseback and muleback; drove in wagons, carriages, and on teams, and they walked if they could not ride. In addition to the two section houses there was one other building standing, solitary, in the wide, ridged, and weed-grown area of the old corn and cotton field. It was a blacksmith shop. It stood on the precise ground now occupied by the Steiner Bank, officered by the Steiner Brothers, who with Frank Nelson, Jr., own and operate the Empire Coal Company at the present time.

Wooden pegs were driven in the big stubble field marking street and city limits, and every lot was numbered. For the lot fifty by one hundred feet on the corner of First Avenue and Twentieth Street, one man in the crowd present bid four hundred dollars cash, and it was knocked down to him at once. The purchaser was an old sea captain, a Swede, named Charles Linn. For nearly twenty-five years he had sailed the seven seas; had crossed the Atlantic sixty-five times, and three times circumnavigated the globe. Born in 1814 in Finland, of Swedish parents, he went before the mast when a boy, and came at length to be captain of his own little sailing vessel, and free to go as he would. Landing in the United States late in the thirties, he decided to try shore life, went south, and set up in the wholesale mercantile business in Montgomery in 1840. He married, raised a family, and acquired a little property. He stood inland life as long as he could, but during the war took to the sea again. He bought a brand new schooner, ran the blockade and got caught. Paroled later from New York, he returned to Montgomery and New Orleans to his family and his shore business. Drawn to Birmingham by Powell's advertising methods he was one of the first on the spot. He set about raising a bank building at once on his lot. It was a temporary frame structure, and was, on completion, incorporated under the name of the National Bank of Birmingham, the very first in the town. Charles Linn himself was president and Colonel Powell and Major Willis Milner among the incorporators.

In the following year Charles Linn built the bank which an early chronicler of Birmingham records as being "a costly and elaborate brick building, fully three stories high, that overshadowed everything in sight." To this extraordinarily tall edifice folk gave the name of "Linn's Folly"; in fact, they said the old sea captain was getting dotish. It was on the site of "Linn's

Folly," however, that in 1906 a sixteen-story steel structure, the largest sky-scraper in the South, was raised, under the name of the Brown-Marx. In this modern building in 1909 are the main headquarters of the Tennessee Coal, Iron, and Railroad Company, the Pratt Consolidated Coal Company, the Southern Iron and Steel Company, the Birmingham Coal and Iron Company, the Montevallo Coal Company, the Shelby Iron Company, the Empire Coal Company, Galloway Coal Company, and many others.

The captain put his son, Ed Linn, then fresh out of college, to work in the bank. Young E. W. Linn, born in Montgomery in 1852, had been sent by his father to Germany to school, and later graduated from the University of Illinois. In 1882 he was cashier in his father's bank, and eventually secretary and treasurer of the Southern Bridge Company, of the East Birmingham Land Company, and director of the Birmingham Gas and Illuminating Company.

The doughty old sea captain kept his own counsel and plodded along. Becoming a stockholder in the Elyton Land Company, he invested largely in Jones Valley real estate. He decided sometime later to build a machine shop. In 1877 he organized the Birmingham Foundry and Car Manufacturing Company, later known as the Linn Iron Works, now the property of the Tennessee Coal, Iron, and Railroad Company, and still used as a machine shop.

Concerning Colonel Powell, J. W. Du Bose writes:

"As first president of the Elyton Land Company, Colonel Powell did perhaps more than any other one individual to establish the company upon a broad and comprehensive line of policy. He at once determined that the city of Birmingham should become the offspring of the company, and that the company should foster the city's growth in every way it could. He steadily adhered to his original plan to buy land — more land, in the face of the directors' opposition. One of the stockholders went so far as to threaten Powell openly with an injunction from the courts to stay 'the mad extravagance' of land purchases, made on the basis of twenty-five dollars per acre, near the city bounds; land that ten years later commanded one thousand dollars per lot."

The month following the first sale of town lots Colonel Powell appointed, as secretary and treasurer of the Elyton Land Company, Willis J. Milner, the youngest brother of John T. Milner. He was a member of the engineering corps of the South and North Railroad and in that way entered Birmingham. Through-

out a period of twenty-five years he was closely indentified with the city's growth. As an officer of the Elyton Land Company, Major Milner inaugurated the first system of Birmingham water works; laid out the system of streets in the South Highlands, the main residence quarter of the city; and in 1884 graded the superb Highland Avenue driveway, designed by his cousin, John A. Milner, and now celebrated throughout the South. He also constructed Lakeview Park, built and operated one of the early horsecar lines, and the Belt or Dummy Line Railroad.

This last venture, undertaken in 1887, was also designed to reach to the coal and iron ore mines; to give terminal facilities to all railroads casting lines towards Birmingham, and to present transportation advantages and easy access of raw material to various manufacturing establishments. It had charter rights to extend to the Warrior River, and in idea was a forerunner of the Birmingham Mineral Railroad, but lacking capital, succeeded to but small grasp of its long reach. Its passenger and freight departments were at length separated; the first became a part of the Birmingham Railway Light and Power Company's system, while the second is now owned and operated by the Frisco system.

It was at this time (early in 1871) that the Welsh iron-master, Giles Edwards, passed through Jones Valley and began his work of prospecting and purchasing mineral properties for the Pioneer Mining and Manufacturing Company, now part of Republic Iron and Steel Company.

"On our way to Tannehill," Mrs. Edwards remarked, "we passed through Elyton, and saw the site of Birmingham. There were then only two section houses for the men starting the railroad — nothing else. But my husband pointed up the long valley. 'There lies Birmingham,' he said; 'all that is going to be Birmingham some day.' And he spread his arms out to take in the whole country — so."

At Tannehill the Edwards family occupied a house near the ruins of the old stone furnace. It is still standing and is known as the "old mansion house." Here they entertained extensively, having visitors from many parts, especially from Pennsylvania, among them members of the Thomas family and Captain Bill Jones.

In response to an inquiry from one E. Wilbur of Bethlehem, Pennsylvania, relative to the cost of constructing a then modern plant on the old furnace site at Tannehill, Giles Edwards wrote, May 26, 1871:

"1. The cost of building a charcoal blast furnace at this place, of the following dimensions: Height, thirty-five feet; diameter at the boshes, nine feet, with hot blast and blowing engine, steam boilers, etc., would be thirty-two thousand dollars ($32,000); a furnace of the above dimensions will make ten tons of pig iron per day — (see accompanying estimate).

"2. The cost of making hot blast charcoal iron will range from seventeen dollars and fifty cents to twenty dollars per ton.

"3. The cost of transportation of pig iron to Mobile from the Brierfield Iron Works, the highest rate that I have known was seven dollars ($7) per ton, by rail by way of Selma and Meridian, Mississippi, to Mobile, and from there by sea to New York at the rate of three dollars per ton, — consult the map and compare the distance from this place, — Tannehill, and Mobile and Montevallo and Mobile.

"4. As to the probable time it would take to build up and get into blast after first breaking ground, I will say that if a start be made the first of August to make charcoal and commence the buildings, I believe that I could make about six hundred tons of pig iron inside of twelve months.

"Any other information upon this subject that you desire I shall be glad to give at any time."

The Edwards family eventually removed from Tannehill to Woodstock where Mr. Edwards constructed his own blast furnace. In addition to being a furnaceman and iron-master, Giles Edwards was also, according to DeBardeleben and others, a practical geologist, a student, an engineer, and an expert prospector. The Welshman worked unceasingly for many years at Woodstock. His wife was his comrade and his helper in every sense of the word. "There never was a better wife than Giles Edwards' wife," an old friend exclaimed, "but how she worked! They were a working team, those two! Up from daylight till dark, always busy, always doing something for other people. They had a big house, and were entertaining company all the time. As no servants could be gotten then for love or money, Mrs. Edwards had her hands full, and the way she managed things and moved around and got things done — there never was her equal!" Certain it is that if ever a woman helped the iron business along in Alabama it was Giles Edwards' plucky wife. Her greatest desire — and her husband's — was to see Wales once more and to take their children there. But they never realized their dream. Together they would often talk Welsh, just as in the old time at Carbondale. Mr. Edwards subscribed for a Welsh paper all his life and one of his intimate friends was a Welsh bard. Often in

memory he would go back to Merthyr Tydvil, his proud town that was named for a king's daughter; and who can ever know how many times he saw those shadowy furnaces of other years loom dark on the horizon line when his heart would ache for home.

He was a quiet, kindly, deep-hearted man who loved his work. How bitter it was to him to see the fruit of his toil turned to cinders, to see the ground he had deemed so solid apparently prove to be quicksand, that caught and sucked under his most cherished projects, none can ever measure. When the depression of 1893 engulfed the land, Giles Edwards was too old to take a fresh start, and he died before he could see beyond the bitter waters.

As for young Birmingham, growing up in the cornfields under the hands of its various aggressive, hard-working, and ambitious citizens, it began gradually to usurp the "pomp, the purple, and the power," as the author of Captain Martin's biography would doubtless declare, of the old county seat, little Elyton. At length, late in 1872, it wrested from it its pride, "the old co'thouse." H. M. Caldwell relates the incident thus:

"When the president of the Elyton Land Company prevailed upon the legislature of the State to pass an act requiring the sheriff of the county to order an election to decide the question as to the permanent location of the courthouse as between Birmingham and Elyton, the excitement rose to fever heat. This election was held under the loose election laws adopted by the reconstruction legislature, which permitted a voter to cast his ballot at any precinct in the county without regard to residence, and under the operation of which the newly enfranchised 'citizen of African descent' might vote at two or more places the same day with very little danger of detection.

"Colonel Powell determined to capture the courthouse, and at once organized a vigorous campaign. His plans were of a most elaborate and comprehensive character and were carried out in all details with consummate skill. On the day fixed for the election, the first Monday in May, 1873, he had prepared, on the lot selected by him for the future courthouse, a barbecue on a most extensive scale to feed the hungry voters whom he proposed to bring to Birmingham.

"He had perfected arrangements with the railroads to run excursion trains from the furthest confines of the county, and perhaps beyond, and to transport free every voter, without reference to race, color, or previous condition of servitude, who would vote his way. About noon on the day of election these trains, packed almost to suffocation with a dark mass of perspiring, hungry humanity, rolled into Birmingham. Colonel Powell,

mounted on old man Dobbins' calico pony, with a drawn sword in his hand, was at the depot to marshal his forces and march them to the ground, where long tables improvised for the occasion were now groaning beneath the load of savory meats just from the smoking pits. While the dusky sovereigns were being formed in line of march, preparing to charge upon the dining-tables, some wag caused it to be whispered among them that the tall, dignified gentleman on the calico pony was General Grant, and forthwith every mother's son of them was prepared to exercise the prerogative of a free American citizen by voting for Birmingham, as General Grant (?) wanted them to do.

"The contest resulted in an overwhelming majority for Birmingham, and the courthouse of Jefferson County was by the edict of the people permanently located at the Magic City. It was, 'Vox populi! Vox Dei!'"

Another *coup d'état* of Colonel Powell's was his invitation, early in the following year, to the members of the New York Press Association to meet in the city of Birmingham. And Birmingham was not then on the map! The situation savored of adventure to the facetiously-minded newspaper men. They came *en masse*. So lavish was Colonel Powell's hospitality, so flowing his eloquence, that the scribes were utterly captivated, and they wrote of the city of Birmingham, "all that might be, as though it were." Then, too, the sight of Red Mountain, and the coals and limestone so close at hand, filled the visitors with amazement. That iron could be made here cheaper than in any other locality in the world was a fact that not only Colonel Powell, but the place itself, drove in sharply. It was at this time that Abram S. Hewitt, reviewing the district thus portrayed, declared, "The fact is plain. Alabama is to be the manufacturing center of the habitable globe."

Meanwhile, in a corner of the new Alabama and Chattanooga depot, young Robert H. Henley had set up a little hand press. He got out a sheet, *The Sun,* every seven or eight days. Being a boy precisely after Major Tom Peters' heart, Henley worked for Birmingham with ardent enthusiasm and with the spirit of sincerity. His father was a lawyer and cotton planter, and the boy had been brought up at home. Beyond Marengo County (settled by a little colony of exiles from France — Napoleon's men — in the early part of Alabama's history) young Robert Henley had never gone. Beyond seeing some slight service in the field for the Confederacy, by which his health had become impaired, he knew nothing of the world. Wherefore his ideas were still ideals,

and his dreams had free wing. On request of the early citizens this young man was appointed by Governor Lindsay first mayor of the city of Birmingham, in the winter of 1871. So high was his appreciation of the gift of this office that he is said to have declared earnestly that whenever the time should come for him to die, he could desire no prouder words upon his gravestone than "Here lies the first mayor of Birmingham."

There have been statesmen made of boys with stuff like that — later proven!

Robert Henley found work to his hand and work which he did. Like the Honorable James Titus, the first and sole Upper and Lower "House" of the territorial legislature of Alabama, Henley, too, had to be several in one. He had, in fact, to be police force, city council, mayor, and editor, too. He married Tom Peters' girl, the major's only child. But it was not long before he began his fight with tuberculosis. After less than a year's hard service in behalf of Birmingham, young Robert Henley died. Into his place as mayor, the city council then appointed Thomas S. Tate, one of Colonel Sam Tate's sons, and he was succeeded in December, 1872, by the big-shouldered Colonel Powell, who was the first mayor elected by the people. The colonel was called (from that time on) "The Duke of Birmingham." He kept on writing stories about Birmingham that, more than all things else, sold the Elyton Land Company's lots. He related things in an off-hand conversational way, which was new in southern journalism, and straight from the shoulder as folk talk. For instance, here is a quotation from the colonel's writing in the spring of 1872:

"There are representatives here in Birmingham from all sections of Alabama. Having a tolerably extensive acquaintance in the State, I find old friends and acquaintances from every direction. And they are all men of enterprise and full of vim. To give you an idea of how business is done at this time, I happened to be in Jacksonville along about March 1, and just as I was leaving I met on the train Jim Morris from West Point, Georgia. Morris was a good old friend of mine. I said to him:

"'What are you doing out here, Jim? where are you going?'

"'Why,' he said, 'I've heard so much of Birmingham, I've decided to run up there and see the place for myself.'

"'Do you intend to settle there?' I asked.

"'Don't know,' said Morris; 'might, if I like it.' We separated then and I saw no more of Jim until yesterday, when I was at the corner of Twentieth Street and Second Avenue, taking in my breath at the way the place was growing, when somebody

called to me from across the street. It was Jim Morris. He had built him a fine storeroom and stocked it full of furniture — good furniture at that. He had nearly finished another two-story storehouse, all in about three weeks' time, and he looks to-day as jovial and happy as he ever looked in West Point."

The colonel's statement that Birmingham was "a perfect Mahomet's paradise of lovely women," it has been stated, "brought more farmers into town than you could count. While they were looking all over Red Mountain for the ladies, why, the colonel sold them lots. Powell was undoubtedly the most astute real estate agent in Alabama history!"

Young Birmingham became in reality a staring, bold, mean, little town: "Marshes and mud roads everywhere and yellow pine shacks and a box car for a depot, and gamblers and traders from all over the globe. A man had to drink full a quart of whiskey before he could see what Powell said was there. And whiskey ran like water. Poker games, cock-fights, and 'trades' were the order of the day from then, off and on, until the eighteen-eighties."

Meanwhile coal and iron, the virgin wealth of the State, slept inviolate. The Elyton Land Company did its level best under Powell, Caldwell, and Major Milner, to get things into shape, and itself on solid ground. Besides the lands owned by the company, it had no other resources. In the market value of these stubble fields lay the very existence of the company — its whole life and strength. The problem was then how to give to this land a market value.

To every settler who would build a home or a mercantile establishment of some sort, special inducements were therefore offered by the Elyton Land Company. One of the first moves of the company, under Powell's dictation, was to provide a hostelry. A two-story frame hotel, L-shaped, was accordingly put up close to the railroad tracks. It was named "The Relay House," and was destined to be for the next twenty-five years the main headquarters for the coal and iron men of Alabama.

"I remember," said Mr. Aldrich, "I distinctly remember the old Relay House. It was our home! I remember the two high, gilt-framed mirrors that people, especially the ladies, used to come to see for miles around."[1]

[1] A clipping from *The Birmingham Age*, of an early date refers to the same mirrors: "The mirrors have an interesting history. They were

Even as early as the year 1886, this hostelry was known as the "Old" Relay House. Bordering its site to-day is the Chamber of Commerce.

Among the men early on the ground who became identified with the city's making were B. F. Roden, R. H. Pearson, and F. P. O'Brien.

As for Benjamin F. Roden, then a young Gadsden merchant, he had chanced by at Colonel Powell's public invitation, in August of 1871, thinking here was a possible market for lumber. He was right, too, for he closed a trade the day of his arrival, selling a load of shingles at three dollars and fifty cents per thousand for the Relay House. Mr. Roden was a keen, quick, practical sort; he knew every inch of Alabama soil, and finding more of a spirit of hustle in the Jones Valley camp than in other places, invested at once, put up a grocery store, and from that day forth built along with the town. He was from old pioneer stock, tracing back to English descent. His grandfather, John B. Roden of South Carolina, was a traveling companion of Daniel Boone, and came to Alabama during territorial times, and was, in fact, the first tax collector of Blount County. His father, W. B. Roden, after a term of service in the Seminole War, married Viola, Honorable Joseph D. Harrison's daughter, and settled down on a farm in DeKalb County. Benjamin F. Roden was born here in 1844 and brought up on the farm. At the outbreak of the war, he enlisted in the ranks of the Thirty-first Alabama and saw service at the front. Having been wounded at Shiloh, he was detailed to the quartermaster's department and also served as assistant surgeon. At the close of the war, crippled as he was, he set out for Texas. "I wanted to get an education," he said, "and I wanted to see the country." He worked his way through McKenzie College at Clarksville, paying his way by teaching the Choctaws in summer, up in Indian Territory. He returned to Alabama later and set up a grocery and timber business in Gadsden. He eventually left there to make permanent settle-

formerly used by Jefferson Davis and were in his residence at Montgomery during the war. The two mirrors were the property of Colonel James R. Powell who rented them to the Confederate president. For some time these polished surfaces reflected the face of the famous Confederate president. The last act he did before leaving his residence on the day of his inauguration was to stand before one of these mirrors and make his toilet for the auspicious event. After he left his Montgomery residence Colonel Powell moved the mirrors to Birmingham and they were placed in the parlors of the Relay House."

ment at the Birmingham camp. He was in at the acorn beginnings of all the mercantile, real estate, banking, mining, manufacturing, and transportation enterprises planted in the rough, little, wooden town. He built and officered the Birmingham Street Railway Company, which, with the Elyton Land Company's railway enterprises under Major Milner, was the first local transportation line. Mr. Roden also founded the Avondale Land Company, the Hillman Hotel Company, the Birmingham Chain Works, the Birmingham Insurance Company, and the B. F. Roden Wholesale Grocery Company. With R. H. Pearson he organized the Central Coal Company, founded and officered the Roden Coal Company, and also became an officer and director of the Avondale cotton mills and a number of the city banks. He had accumulated, at the time of his death, on February 23, 1908, large properties, means, and influence.

Robert H. Pearson, like Mr. Roden, was a native Alabamian and originally of English stock. He was the first lawyer of Birmingham. Born in 1850, on a Barbour County farm, R. H. Pearson began his working career teaching school, and later studied law at Lebanon, Tennessee. Graduating in 1871, he was admitted to the bar in his home county. "Every one everywhere was trying to get to Birmingham," he said, "so I thought it would be a good place for me to start law practice." He eventually became assistant solicitor of the court of Jefferson County, served for many years as city attorney, and at one time as mayor of Birmingham. He was the first legal representative of the pioneer coal and iron corporations, and subsequently became a coal operator himself. He bought out Pierce's mines, near Warrior, which had been opened before Birmingham was laid out, to supply the railroad demand. He organized the Pearson Coal and Coke Company, opened up the Wolf Den Hollow mine, and enlarged the Warrior operations. He also acquired the Kimberly properties on the Jefferson seam, developed them, and consolidated them in 1902 with Roden's Central Coal Company in which he became a director. He then organized the Jefferson Coal and Coke Company, and took hand with B. F. Roden in his various realty and industrial enterprises. He meanwhile acquired more coal properties throughout Blount, Walker, and Fayette counties, and in 1908 organized the Pearson Coal and Iron Company. While he had no political aspirations, he stood high in the Democratic ranks, and served several terms as chairman of the county Democratic executive committee.

In 1903 he was selected as a member of the arbitration board which settled the coal miners' strike, and on which Judge George Gray of Delaware was chairman. Colonel Pearson died October 16, 1909, in Birmingham.

As to Frank P. O'Brien there are many details of interest. Young O'Brien was an Irish boy, born in the Old Country, in the city of Dublin, February 29, 1844. He was the son of Michael O'Brien, who was an educator and writer, and, after his emigration to America in 1848, a mining man, who settled at Scranton, Pennsylvania. When young Frank was fourteen years of age, he quit school and ran away from home. He took up the trade of scenic and fresco painter, working under Peter S. Schmidt who was engaged in mural decoration in the capitol at Washington, District of Columbia. Schmidt was employed in 1859 to decorate the theater at Montgomery, Alabama, and brought young O'Brien south. With the outbreak of the war, the Irish lad enlisted with the Montgomery Blues. He saw active service, and when the war was over, he went back to his first trade, wandering through many a town. Then in 1871, he landed in the camp of Birmingham, as a contractor and builder. Straight from the town's birth year to the present day, a period of nearly forty years, Captain O'Brien, hearty and honest, aggressive, ambitious, and prosperous, has been identified with Birmingham. He brought into Alabama the first steam machinery for making brick, conducted a planing mill, superintended, in 1879 and 1880, the construction of the first rolling mill in the Birmingham District, and built the coke ovens of the Pratt Coal and Iron Company, at Alice and Oxmoor. With Colonel J. F. B. Jackson he established the Birmingham Gas and Electric Company, now the Birmingham Railway, Light, and Power Company. Captain O'Brien also owned and edited the *Age Herald* at one time, and served as sheriff of Jefferson County. In 1908 he was elected to the office of first mayor of Greater Birmingham, which position he now holds.

CHAPTER XVI

RECONSTRUCTION OF OXMOOR AND ADVENT OF LOUISVILLE AND NASHVILLE RAILROAD INTO ALABAMA 1872–1873

Controlling interest in Red Mountain Iron and Coal Company acquired by Daniel Pratt and Henry F. DeBardeleben. Judge H. D. Clayton elected president. Name of company changed to Eureka Mining Company. Last venture of Daniel Pratt. Young DeBardeleben comes on the field. Early history of the "King of the southern iron world." Joseph Squire's reminiscences. Oxmoor furnaces at length rebuilt. Dramatic episodes in railroad history. Another crisis in affairs of the South and North. The Sage-Stevenson-Stanton conspiracy. Defeat of Frank Gilmer. Albert Fink saves the day. Details of the Sloss proposition. Question of interstate traffic before Louisville and Nashville officials. M. H. Smith's recollections. Railroad system needed Southern outlet. Arguments for and against extension policy. John T. Milner converts Albert Fink. Dramatic scenes in the blue parlor. Explosion of Sam Tate's bomb. President Newcomb adjourns meeting *sine die*. Scrap between Tate and Newcomb. Terms of compromise. Construction work resumed on South and North. Introduction of Colonel Alfred S. Rives, Frank W. Wadsworth, J. F. B. Jackson, Bartley Boyle, St. Kevin St. Michael Cunningham, and James Cozby Long. Apparent failure of extension policy. Summary of coal mines operating in 1873. Failure of Irondale and panic of '73. Cholera plague in Jones Valley. Fall of Birmingham.

EARLY spring of 1872 marked the entrance of Daniel Pratt and Henry Fairchild DeBardeleben into the Birmingham District. They acquired controlling interest in the Red Mountain Iron and Coal Company, and upon Colonel Troy's failure to enlist northern capital in the reconstruction of the Oxmoor furnaces, they assumed charge of the reconstruction work. A reorganization was effected, Judge Henry D. Clayton of Eufaula, Alabama, was elected president, and the name of the company was changed to the Eureka Mining Company, after Captain E. B. Ward's triumphant Michigan enterprise.

Daniel Pratt and Judge Clayton put up the bulk of the money needed to construct two twenty-five-ton charcoal furnaces modeled after the Shelby plant, and agreed to make up deficiencies, should the other stockholders fail to raise the full amount required.

This venture of Daniel Pratt is spoken of by his biographer, Mrs. Tarrant, as "the last and crowning act of his life." She

says: "It was undertaken reluctantly on account of his age and infirmity, for he doubted if he should live to witness its completion, yet his State pride urged him to undertake it. He believed something should be done to develop the mineral resources of the State. He thought labor should be diversified in order that the South might sustain herself. . . . For this enterprise he felt great solicitude, and remarked a few days before his last illness, 'If it is the will of God, I should like to see the completion of this enterprise.'"

Young DeBardeleben, who was Mr. Pratt's son-in-law, was appointed superintendent and general manager of the new company at a salary of $7,000 per year, which was big money for the office in those days. "And I came in and took charge of what I knew nothing about!" DeBardeleben says: "I'd worked iron up into gins, but I had never set eyes on the raw product. Oxmoor was my first lesson in the iron business, and Joe Squire was my first teacher on coal."

Up to this time, early in 1872, DeBardeleben had never put foot in the mineral region. Nothing was known of him more than that he had helped run the gin factory down in Prattville for several years and had married Ellen Pratt, Daniel Pratt's only child. He now took hold of his new job, and began to spur on the work to a galloping pace. Savagely energetic, restless, impatient, he seemed to have one foot always in the stirrup, and to be itching to mount and be off and away. Surely he had plenty of sap in his bones. He was just about thirty then, and dashingly good looking, they say. Six feet tall, he was erect and well proportioned, and an athlete. He could leap his horse clear from the ground, they tell, and ride like Bill Weatherford. His hair and mustache were black, his face ruddy, and his eyes black and quick as a bird's. His aquiline nose and a certain arch of brows, with the bright quickness of his eye, gave to his profile then, as now, a keenness, a hawk-like look.

Although born and reared in Alabama, Henry Fairchild DeBardeleben was of Hessian breed, and showed it. His great-grandfather was one of the twenty-two thousand fighting men who came out of Hesse-Cassel to the Colonies, at England's call, during the American Revolution. Landing at Charleston, South Carolina, this Captain DeBardeleben hired out himself, his sword, and his men, for England. When the war was over, he got a wife in South Carolina and bred tall sons in the Southern woods.

A liking for the wild forest, a free life, and the big surge of the far away hills had quickened the DeBardeleben blood for generations. "The Indian's life as it used to be, — that is the only life worth living," Colonel DeBardeleben says: "I'd rather be out in the woods on the back of a fox-trotting mule, with a good seam of coal at my feet than be president of the United States. I never get lonely in the woods, for I picture as I go along, and the rocks and the forests are the only books I read."

And, indeed, given his fox-trotting mule, a coal seam, and a "couple of niggers" with picks and shovels, and DeBardeleben, even to-day, becomes lost to civilization for months at a time. He is a born woodsman, and never gets lost in the woods, but in a town or city, even in Birmingham itself, that he has seen grow from a smithy and railroad crossing to the great coal, iron, and steel center of the South, he frequently becomes more or less bewildered.

To return for a moment to his forebears. Scarcely a record is extant. The old Hessian captain's grandson, Henry DeBardeleben, left South Carolina for Alabama in his later life. His first wife had died, and late in the eighteen-thirties he married a Miss Fairchild of New York. He owned a cotton plantation in Autauga County, where was born, in 1841, his oldest son, Henry Fairchild DeBardeleben, destined to become the most picturesque and dramatic character in the coal and iron history of the South.

When Henry DeBardeleben was no more than ten years old, his father died. His mother then took her little family to Montgomery. Henry began to earn a few dollars a month by working in a grocery store. At that time in Alabama there was a strong bond of interest and friendship between the few Northern men and women in the State, and Daniel Pratt and his wife were old-time friends of the widow DeBardeleben. Pratt at length became the guardian of Henry F. DeBardeleben, and brought him to Prattville when he was sixteen years old and sent him to school. He took him into his home as one of his own family, and brought him up as his own son, in the "big white house," as the Pratt home was always called.

Now from the plain record of his life, Daniel Pratt's one gospel was work. Indeed, he wore duty, labor, principle, religion, strapped, as boards, upon his back. His weather-vane pointed uncompromisingly toward New England. His sphere of life was

a narrow height, skyward reaching, rock-rimmed, just such a place for an eagle's breeding. And, indeed, one scarcely stretches a point when it is said that from this rock in reality an eagle did take wing, as presently shall be discerned.

For the time being, however, one may readily surmise that the wild boy with the Hessian blood in his veins must have been often a sore trial to Daniel Pratt. He was forever cutting loose from everything, and making for the woods, stalking deer, running down rabbits and foxes, making his home with all manner of strange folk. Books and the four walls of the schoolroom irked young Henry, but Daniel Pratt bent him to study and discipline two mortal years. To keep him occupied out of school hours, however, and to give him a chance to work off some of his energy, he made the boy boss of the teamsters and the lumber yard. This job got the young fellow up before daylight, and gave him some slight idea of discipline, self-control, and management; it gave him, too, a certain fellowship with the men about the works. The boy was not a shirker or lazy. Then, too, work was a respite from the books. At length he had his chance to quit books altogether, for Daniel Pratt made him superintendent of the gin factory.

Then the war broke out, and young DeBardeleben enlisted as a private in the Prattville Dragoons. He lay in barracks a space, at Pensacola, and then made straight for the firing line. A sinew of Bragg's army, his company went through Shiloh, after which DeBardeleben was detailed out of the field by Governor Shorter, to take charge of the bobbin factory at Prattville, which had been pressed into the Confederate service. This year, 1862, was also the year of his marriage to Ellen Pratt, the daughter of Daniel Pratt. She was sixteen and DeBardeleben twenty-one years of age.

He got into habits of steady industry during the ensuing years, became of some real assistance to Daniel Pratt, and helped manage with good grip the growing business. Pratt came to confide more and more his business projects to his son-in-law, and in particular, his new railroad enterprises, the South and North business, and the iron making venture in Shades Valley.

The coal mines of the Red Mountain Company were at that time in charge of Joe Squire who had been employed since the fall of 1871 by George N. Gilmer and A. J. Noble. Mr. Squire also had charge of the engineering work.

"On May 13, 1872," he writes, "Daniel Pratt and Henry F. DeBardeleben came to the Helena Mines, and informed me that they had bought a controlling interest in the Red Mountain Company's mining and furnace property, and requested me to keep charge of the Helena mines, and also do some surveying at once at the Oxmoor furnace property. I got on their waiting train and accompanied them to Oxmoor, where they directed me to survey the boundaries of the lands, especially the Red Mountain Company's lands, and locate a mine in the Red Ore, and a tram road for the supply of the furnaces with said ore, and more especially to notify the people in the houses at the works to please vacate them as they would be needed in the course of a month for the hands."

Early in the winter of 1873, the Oxmoor furnace went into blast. Daniel Pratt was down then, ill to death, but he rejoiced deeply over the fact that the reconstruction work, by which he hoped the South would gain new life, and diversified industries have birth, had at length, partly by means of his own earnings and his counsel, and by the work done by his son-in-law, reached completion.

"I remember the very day our furnaces went into blast," said DeBardeleben; "the dogs started up a deer, and ran him full speed clean over the pig bed. The woods all round were chuck full of game. The wild turkeys flew every which way." The place is still wild and wooded and strangely picturesque.

The village of Oxmoor took on new lease of life for a little while, under DeBardeleben's administration. Mary Gordon Duffee revisited the place about this time when she was invited to Birmingham as the guest of the city. Of Oxmoor she says:

"The furnaces were just rebuilt, and the former sense of busy, active life pervaded the spot. Here every attention was shown me, deference to my slightest wishes, manifested by all the employees from the highest to the lowest. Carefully I investigated the works and made notes. But those who expected brilliant language from me were disappointed. I was too full of the silent memories of the dark hours of the past to venture a word. I knew I could not talk; I was too deeply moved. Little did the elegant men who escorted me about know how often I brushed the tears away as I made notes in my book. There I stood by the enormous engine wheel, and recognized the hand of kind Heaven in raising up Daniel Pratt to 'rebuild the waste places' and 'make the desert blossom as the rose.'"

We withdraw now for a space from Oxmoor, and the story of DeBardeleben to take up again the tale of the South and North

Railroad, and to relate the curious and dramatic circumstances under which the Louisville and Nashville Railroad Company acquired possession of the great State road, and shouldered the burdens of the Birmingham district. Notwithstanding the fact that John T. Milner had beaten Stanton on the cross roads proposition, and frustrated the first effort to transfer the now growing young town of Birmingham to Chattanooga, both the town and the South and North Railroad were again caught in a noose of Stanton's throwing, that threatened to strangle them both.

The State of Alabama, itself, emaciated, impotent, was just beginning to writhe out of the grasp of Carpet-bag legislation. It had indorsed first mortgage State bonds in New York to the amount of $2,200,000 to aid the South and North in its construction to Birmingham. The road was then actually in operation to Birmingham, and complete as far as Blount Springs. A sixty-six-mile gap between the Springs and a point twenty-seven miles south of Decatur lay yet unfinished, practically untouched. These bonds, issued and hypothecated by the railroad, were not sold, but were so disposed of to the pledgee that they could be sold by him at his option, at either public or private sale. Two of the pledgees in question, who were also the men holding a majority of the bonds, were Russell Sage and V. K. Stevenson. They were, with John C. Stanton, allied to Chattanooga interests. When the State of Alabama failed to meet interest on these bonds, Sage and Stevenson took train at once from New York to Montgomery, where they met Stanton. The time of this meeting and of the subsequent transaction is termed by Milner "the most critical and dangerous period in the history of Birmingham and of the South and North Railroad."

Before going into the banking business in New York, V. K. Stevenson, it seems, had served as president of the Nashville and Chattanooga Railroad Company, and was then a controlling stockholder in that railroad, and had large holdings in the town of Chattanooga. Stanton himself had just completed a hotel in Chattanooga, "The Stanton House." It had been built with Alabama State money, or bonds corresponding to State money. He had invested largely in town lots, and had made up his mind, since Birmingham had been lost to him and to the Alabama and Chattanooga Railroad Company (now Alabama Great Southern) through John Milner's "trick," that all the commerce in

coal and iron, which was about to open up in Jefferson County, should be carried straight up to Chattanooga. And there connections would be made for its world-wide markets. "Chattanooga, not Birmingham," writes John W. Du. Bose, "was designed thus to become the *entrepôt* of the mineral wealth of Alabama."

A meeting of the directors of the South and North was called by Sage and Stevenson at the Exchange Hotel, just after their arrangement with Stanton. A demand for an immediate settlement of the bonds and interest to date was made, or, in lieu of that, complete and total transfer of the South and North Railroad to the Nashville and Chattanooga Railroad Company; stoppage of the railroad at Birmingham; cutting out further construction on the sixty-six mile gap, — all of which, in short, meant the transfer to Chattanooga of all the interests and industries then centering in Birmingham. Practically, it meant the murder of the town planned in cold blood. Unless this proposition was accepted as it stood, declared Russell Sage, he and the other two men would foreclose. Frank Gilmer sat there, haggard. For months he had been working for money to meet the interest and had failed. He sat dead quiet for the moment, and then turned to the other directors. "You know," he said simply, "I 've exhausted every resource in New York. We raked that city and this State with a fine tooth comb for funds, and it 's no use. I don't see but that we 've got to accept this proposition as it stands."

"The deuce we do!" Josiah Morris and E. C. Hannon and the other men, Albert Strausburger, Bolling Hall, Benjamin Bibb, and John T. Milner, all stood up.

Stevenson lost his head and "raved," says Milner (who, with John W. Du Bose, is our authority for the incident), while Russell Sage "quietly threatened," and pointed out in "calm, cold words" the precise facts of ruin and dead loss staring the South and North Railroad Company square in the face, at every point it turned.

But their proposition was rejected. Besides the hopes and interest for Alabama's future, the personal fortunes of the South and North men were tied up not only in the railroad, but in the making of the city of Birmingham. The meeting broke up in a storm just after midnight. What step to take next, no man knew. Before next daybreak a miracle happened!

No less a power entered on the scene that night than Albert Fink, a man whose very size meant might, for he stood full six feet seven, and was "a very giant," Kevin St. Michael Cunningham tells us; and besides his own impressive personality he bore on his sturdy shoulders the entire power of the Louisville and Nashville system, something as Milton H. Smith came to do in later years.

Nominally vice-president and general manager of the Louisville and Nashville, he was in reality, president, for besides building great steel bridges, Albert Fink officered the whole railroad.

"His appearance on the scene of action at this particular juncture," writes Milner, "seemed like a revelation, — and it was!"

He brought with him that night the proposition that saved Birmingham and the South and North. It was the James Withers Sloss proposition.

Colonel Sloss was president of the Nashville and Decatur Railroad, and at all times was a helper and coöperator, along with Luke Pryor and George Houston, of the South and North. The Nashville and Decatur Railroad had been organized on January 1, 1867, by consolidation with the Central, Southern, Tennessee, and Alabama Railroad companies. The road extended from Nashville to Decatur a distance of one hundred and nineteen miles, of which twenty-six miles lay in Alabama. Colonel Sloss knew, as everybody in the State knew, the predicament the South and North road was in. He got wind of the Stevenson-Sage-Stanton game, and he saw at once that everything was up with his own road, as well as with the South and North, unless their move was checkmated. He hastened up to Louisville to see if he could enlist Albert Fink's support. His proposition was that the Louisville and Nashville should lease the Nashville and Decatur for a period of thirty years, take up the hypothecated bonds of the South and North, and complete the sixty-six mile gap in that road, thus making of the two divisions practically one line of railroad, running straight from Louisville to Montgomery, where, by eventually making connections with the lines already in operation, it could make through traffic to the Gulf.

As it happened at this particular time (1871–72), the question of the necessity of through or interstate traffic was uppermost in the minds of several of the Louisville and Nashville people.

Up to that time the promoters of the early railroad enterprises all through the South provided only for local traffic.

Relative to interstate traffic Milton H. Smith says:

"They did not anticipate the revenue to be derived from through or inter-state traffic. If a shipment were to be made from Louisville to Atlanta, it was transferred at West Point, Georgia. Shipments from Louisville via the Louisville and Nashville, for Atlanta, were transferred at Nashville, again at Chattanooga; and again at Atlanta, if going beyond Atlanta. Having but limited equipment and being constructed for local traffic only, no company would permit its equipment to leave its line. Each road exacted full local rates, regardless of point of origin or of destination. Under these circumstances, the road had to be sustained, if at all, by local traffic; and if the local traffic at the then relatively high rates as compared with the present rates was not sufficient for that purpose, the loss fell upon the promoters, or upon those who furnished the capital to build the roads. At that time the Louisville and Nashville Railroad Company was operating a railroad from Louisville to Nashville, and from a point near Bowling Green to Memphis, with some other branches. With its large investment in these lines it was necessary to secure through or inter-state traffic, and to engage actively in moving property between points on and beyond the Ohio River and Chattanooga, Atlanta, and points beyond. To do this they had to interchange traffic with the Nashville and Chattanooga Railroad at Nashville. The Nashville and Chattanooga Railroad was also interested in what was known as the Nashville and Northwestern Railroad, a line extending from Nashville to Hickman, Kentucky. The management of the Nashville and Chattanooga Railroad deemed that the interests it represented would be promoted by diverting traffic, so far as it legitimately could, from Louisville and Cincinnati, or points reached via the Louisville and Nashville Railroad to St. Louis and other points. In other words, it was claimed by the Louisville and Nashville that the Nashville and Chattanooga road discriminated against it on business delivered to it by the Louisville and Nashville from Louisville and Cincinnati, by exacting higher proportional rates from Nashville to Chattanooga and beyond than it exacted on traffic coming to it over its long line, the Nashville and Northwestern."

This state of affairs rendered the management of the Louisville and Nashville Railroad desirous of an outlet. The extension policy had been up before the board several times before the Sloss proposition was received. The company had the monopoly of the southern business, and had grown rich from Federal transportation during the war. It was paying annually large dividends

to its stockholders. But there was a disagreement as to the policy of extension; one half of the directors were for and the other half were against it.

"Both were right," says Milner. "A paradox it may seem, but the parties viewed this question from different standpoints. The one party said, 'Let well enough alone, and pay us annually our accustomed dividends.' The other party saw in the future, by extension, the greatest railroad in the South, and perhaps in the United States." This vista was clear and far. The vision of regularly earned cash dividends would be but a mirage for a generation to come, were the extension policy adopted.

The move of the Stanton crowd now brought matters to a head. The Sloss proposition was placed clearly before the board, and pending the issue, Albert Fink took train to Montgomery to call a halt to the Sage-Stevenson-Stanton game, and to inform the South and North of the discussion under way.

A committee of the South and North men was straightway invited by Mr. Fink to wait on the Louisville and Nashville directors in Louisville "in reference to an agreement on some terms of immediate aid." This committee comprised Frank Gilmer, Bolling Hall, E. K. Mitchell, John Milner, and Sam Tate who was the contractor in charge of the construction work.

Colonel Tate had been for years a railroad promoter and manager. He had constructed the Memphis and Charleston Railroad, whose slight beginning under the name of the Decatur and Tuscumbia has already been related. This road was, during the early eighteen-seventies, as far as volume of traffic was concerned, the most important line in the entire South, and was under the presidency and management of Sam Tate. Colonel Tate was a big, double-jointed Tennessean, and uncompromising.

The South and North Committee convened at Louisville. Albert Fink met Mr. Milner at the depot and invited him up to his house for breakfast and a preliminary "talk." Milner furnished him the figures as to the exact cost of, and the condition of, the South and North Railroad Company; but the business future of the road through Alabama, being then an unknown quantity, could only be generally forecasted. Milner, being the enthusiast he was for the Hill Country, drew a picture that fired the Teutonic imagination of Mr. Fink, and that gentleman then held executive session with Mr. Newcomb, at that time president

of the Louisville and Nashville, and holding the casting vote as to extension policy.

That very evening a meeting was called in the Blue Parlor of the Galt House. The Louisville and Nashville directors and the South and North committee were promptly on hand; so was Colonel Sam Tate. The Louisville and Nashville officials were still divided, three for and three against the policy for extension, while Mr. Fink was for it, and Mr. Newcomb was, apparently, influenced by his vice-president's attitude.

Proceedings opened informally and pleasantly enough. Pros and cons were discussed at length and without heat. At the end of an hour or so the sentiments of the gentlemen concerned remained unchanged, three for, three against, and Newcomb still non-committal. All at once Colonel Tate stood up. As representative for the contracting company of Sam Tate and associates to build the road, he demanded $100,000 bonus as a consideration for surrendering the contract.

The demand was a bomb, which, up to that point, had been strung up Tate's sleeve. It exploded in the room with terrific force, hitting both sides.

Colonel Newcomb leaped to his feet, his wrinkled hands trembling. He was a very old man, and a choleric one. "D' ye think I'll stand for any highway robbery!" he cried, and declared the meeting adjourned *sine die.*

Tate then sprang at Newcomb. The two men met in the middle of the room.

Tate raised his stick as though to strike Newcomb, but he did not strike. He said he would not give such as Newcomb even the little end of his stick. Then he stated that he had already arranged a transfer with the Sage and Stevenson party, but was willing to make a trade with the Louisville and Nashville people. Newcomb went savage at this. Both men grappled. Big Fink sprang between them. Though both Colonel Tate and Colonel Newcomb were tall men, Albert Fink towered head and shoulders over both. He laid hands on their shoulders and succeeded in parting them, saying in his broken English: "Colonel Tate, you stop this! Colonel Newcomb, you come along with me," and he got Newcomb out. Milner remarks at this point, "The fat was then all in the fire."

It looked as if the South and North business were about done for. Major Bolling Hall attempted to appease Tate, but Tate was

inexorable. Conditions were black, could not have been blacker. Fink came back and Tate still held his ground.

"Whiskey is cheaper in Kentucky than water," says Milner, "and, for some purposes, much better. Mr. Fink rang a bell, and pretty soon every man in the Blue Parlor had his glass." Quiet was restored, and, in some degree, good fellowship. Some of the directors parted, in fact, feeling like brothers. Not a shot had been fired when Albert Fink adjourned the meeting until next day. He telegraphed for Colonel Sloss, who came at once. Sloss reported that Davidson County, which held majority stock in the Nashville and Decatur Railroad, would vote unanimously for lease of their road to the Louisville and Nashville. The contract was then drawn up, and at a called meeting next afternoon, the Sloss proposition entire was carried as it stood, Newcomb casting vote as Fink suggested.[1]

In precisely this manner the great Louisville and Nashville railroad entered upon Alabama soil, saved a sister railroad from destruction by some of its very own life blood, as it eventually turned out; rescued the young city of Birmingham from oblivion, and began that labored and extraordinary course, that, a decade later, under the guiding hand of Milton H. Smith, was to change the industrial map of the Southern States of North America.

Construction work on the South and North was at once resumed. When nearing completion, however, there was a disagreement between Colonel Gilmer and the Louisville and Nashville officials, in which Colonel Gilmer, "standing up for what he believed to be the rights of the South and North Company, in face of his own personal disadvantage," states Milner, "lost out with the new management, and trod the road into the poverty and obscurity in which he died. The incident was the sublimest act of his life."

Succeeding Gilmer as president of the road came Colonel Sloss,

[1] On inspection of the old contracts, sent by M. H. Smith, president of the Louisville and Nashville railroad, it is found that Tate changed his demand for bonus at length to $75,000. The terms in substance were that his contract of April, 1869, with the South and North Railroad Company was assigned and transferred to the Louisville and Nashville, "except in so far as the former contract applied to that part of the South and North lying between Montgomery and Elyton and between Decatur and Elyton." The Louisville and Nashville company bound itself to perform all obligations imposed by contract on Tate and his associates, and to assume Tate's obligations to subcontractors and other parties who furnished material for construction to the road. This document, dated May 19, 1871, is signed by H. D. Newcomb, and approved by F. M. Gilmer, Bolling Hall, Sam Tate and Associates.

who shortly afterwards located permanently in Birmingham and became identified with the coal and iron development of the district. Among the engineers connected with the new *régime* were Colonel Alfred S. Rives, superintendent of construction (succeeding Major Robinson), Frank W. Wadsworth, J. F. B. Jackson, Bartley Boyle, and, in a minor way, St. Kevin St. Michael Cunningham. All of these men bunked together in one of the old Alabama and Chattanooga section houses where, by the way, the buildings of the Crane Company stand to-day. "The Elyton Land Company folk lived in the other one," Mr. Cunningham says. "Both were two-roomed, vertical pine board shacks, battened on the outside. We all fed in a log cabin just back of the shacks. . . . Coal dust mixed in the gravy . . . iron ore in the soup . . . and Colonel Rives, y' know, was born and bred in Paris!"

For Colonel Rives, son of the United States Minister to France, godson of Marquis de la Fayette, and at home in the great capitals of the world, life in this new, growing, shabby, wooden town in the stubble field of the American wilderness was indeed a contrast, and he did not put up with it long. His family had removed from Castle Hill, Virginia, for a temporary stay in Mobile, where the colonel eventually joined them, when he undertook the construction of the Mobile and Ohio. His little daughter, Amélie Rives, whose "The Quick or the Dead" so stirred the literary world in after years, was then but a slip of a girl. It is interesting to note that Mary Johnston, the daughter of J. W. Johnston, another one of the men instrumental in the railroad development of Alabama a decade later, has also become a widely known writer.

Frank L. Wadsworth was one of the division engineers, and later superintendent of the Alabama and Chattanooga. He was a native of Montgomery, and eventually connected, as will be noted, with development work in railroad, coal, and iron lines of the Birmingham district. The Wadsworth coal seam is named for him. He was later associated with DeBardeleben, as manager of the Pratt Coal and Coke Company, when T. H. Aldrich resigned to organize larger properties. Another division engineer connected with early construction work on the old Alabama and Chattanooga Railroad was James Cozby Long, formerly a naval officer. Young Mr. Long, a graduate of the Naval Academy at Annapolis, had resigned from the United States navy to enter

the Confederate service. He fought on board the *Merrimac* in her encounter with the *Monitor*. At the close of hostilities he came to Alabama and was engaged in railroad construction work, surveying, and civil engineering for many years, latterly in connection with government work. At the present time he is assistant engineer in charge of the construction of the Eastern section of the Illinois and Mississippi Canal.

As for Kevin St. Michael Cunningham, he was Albert Fink's favorite. He is a tall, spare, lanky man, an Irish gentleman, lean as a lath, but with a head and features such as would take a sculptor's eye. A scholar, too, indeed, as the Arab physician, Karshish himself, "a picker-up of learning's crumbs." Humorous, romantic, brilliant, effervescent, he kept his comrades in a roar from morning until night. Fink carried him up to Louisville, nominally as a draftsman, but in reality, for the pleasure of his company. "It was there, y' know, I got my first real chance at books," Mr. Cunningham said. "Like Eve and the apple, then, y' know, it was all off with me! I ate! I ate! Yes, it was there my head got kinked." And indeed the rich scholar blood of the fellow leaped, and, helpless, he made for Europe again, and drifted over the old world — after the crumbs left over in Florence, in Venice, and in Rome. Colonel Rives got him back, eventually, from Italy, and Kevin St. Michael Cunningham took a position in the land department of the Mobile and Ohio Railroad. He lives down in Mobile to-day. He is an old man of seventy odd now, and one of the few who recall the earliest days of Birmingham. His inimitable characterizations of the pioneers, given in a random talk here and there, have been used throughout this story.

Could the man but be induced to write his memoirs, they would, indeed, be pure gold. But it will never be done, for he is as utterly indolent as he is delightful, and exquisite, mysterious, and tantalizing.

The South and North line was, at length, completed, and opened for traffic in September of 1872. The cost of construction was immense owing to the heavy grades, excessive curvature, trestle building, and the amount of powder and dynamite it took to force the road criss-cross over the Hill Country, and the outlay was far more than the Louisville and Nashville bargained for. And now that the work was done, there was no traffic; agriculture was dead, and there was no travel. The rate on pro-

visions was double that of the present day. The few coal mines, designated by Mr. Fink as "rat holes," that had been opened at Warrior and Helena, did not produce in a year what became, in 1889, one day's output from Pratt. Thousands of tons of red ore had been carried to Indiana and Pennsylvania and declared to be utterly worthless. There was hardly a saw mill going.

"The great railroad was a failure," said Milner, "and like the Alabama and Chattanooga Railroad, its tracks furnished good grazing for cattle." The panic of 1873 found it a ready victim. The Louisville and Nashville could not even get credit. Every portion of its giant system throughout other States was affected by the transaction in Alabama, which then seemed fatal. Yes, the extension policy, so forcibly advocated by Albert Fink, now appeared about to bankrupt the whole system. Albert Fink ran across Milner one day in Montgomery, about this time. "He turned on me," says Milner. "You have ruined me, you fool, me, and the Louisville and Nashville Railroad Company," he cried. "The railroad will not pay for the grease that is used on its car wheels! Where are those coal mines and those iron mines you talked so much about that morning, and write so much about? Where are they? I look, but I see nothing! All lies! — lies!" And the big Dutchman turned on his heel, and left the engineer standing there.

"That moment," said Milner, "then and there I determined to open the Newcastle mines, in self-defense." Albert Fink resigned from the Louisville and Nashville, in disgrace, as he held it, at the failure of his extension policy, and he went to New York, where he later became an even more important figure in railroad manipulations than he had ever been in the South.

The Newcastle Coal and Iron Company was organized by Mr. Milner in 1873. A slope was sunk on the Milner or Newcastle seam. The output was seventy tons per day. The Jefferson Coal Company was started in 1874 by Myer, Morris, and Company. The mines at Warrior Station, opened, as already mentioned, by J. T. Pierce, in 1872, were enlarged. New mines were located on this seam by O'Brien, Moss, and Hogan. In 1875 these Warrior mines were all purchased by the Alabama Mining and Manufacturing Company, and improvements were made. It will be recalled that it was in this precise locality that, in 1836, coal was mined from the bed of the river and carried by barges to Mobile.

Other coal mines in the Warrior field (all exceedingly crude

workings), existing in the State at this period, were, according to Dr. Eugene Smith's report, at Clement's Station and Caldwell's Station on the Alabama and Chattanooga Railroad, and others in the vicinity of Tuskaloosa. A number of Welsh miners were induced to leave Pennsylvania by the Tuskaloosa Mining and Transportation Company, organized in 1873. Concerning the mines in the Cahaba field, the Montevallo and Cahaba River groups have been noted. Richard P. Rothwell, editor of the *Engineering and Mining Journal,* observed in 1873, that "very little had yet been done towards developing the Alabama coal fields, partly owing to the absence of all commercial manufacturing enterprise in the South under slavery, and partly owing to the want of capital, and the disturbed condition of the South since the war." Samuel G. Jones of Alabama, observes at this same date:

"The coal business is now in its infancy, yet the growth outside of Alabama has been rapid, and it has attained vast proportions elsewhere in the United States."

As for the iron industry all over the United States, sharp-taloned Fate sprang upon it from covert, as it were. This was the time when McElwain's plant at Irondale went under.

Pig iron that had been selling at forty dollars per ton fell to eight dollars per ton. The two twenty-five-ton furnaces at Oxmoor could not be made to exceed ten tons as daily output, and that, with young DeBardeleben's ignorance of the business, cost more, as he said, to get out than it ever brought back. Labor could not be got and what they had could not be paid for. The very foundations of the Eureka Mining Company were crumbling, as it were. "I failed to make good," said DeBardeleben, "we called a directors' meeting, and I resigned my position, giving my reasons that I considered myself incompetent, as I was at that time. I refused to accept my big salary for the previous year, for I did not consider myself entitled to it. Furthermore, I advised the directors to shut down the plant. Considering the conditions of the iron business in Alabama and everywhere else, I did not see that our furnaces could be run with profit to anybody."

The plant was shut down. DeBardeleben returned to Prattville, and the Oxmoor furnaces grew cold. Meanwhile the plague of cholera all at once swooped down upon Birmingham

like a bird of prey. There was no water supply, sewerage, or drainage system of any kind, and there were twenty-five hundred souls in the little wooden town! The black-winged thing brooded there, still and ominous, all the long, hot summer time. Foremost among those who stood at their posts, and, with God's priests, cared for the stricken and buried the dead, were Frank P. O'Brien, Bob Pearson, J. B. Luckie, and Mortimer H. Jordan.

John W. Du Bose writes of the unfortunate town, at that time:

"Destruction walked roughshod over the morning of its prospects. . . . Hardly had the fearful scourge subsided than the financial revulsion, beginning with Black Friday in Wall Street, prostrated every interest in the Union. Birmingham, feeling the shock, ceased to grow, and practically disappeared from all calculation and influence."

As for the stock of the Elyton Land Company, it went down to seventeen cents on the dollar, fifty per cent of its cost. Once down, the corporation was attacked from all sides. The courts instituted suits to get back the funds put in to start the water works. Right and left the company was sued. The very desks, chairs, and tables of the office were levied on. Had adverse judgments been rendered the company at this time, its very bones would have been picked and thrown away.[1] Certain it is that the company, the railroad, the blast furnaces, and the town were barely breathing in the year of 1873. The events that brought it to its feet will presently be reached.

[1] Colonel Powell's dream of millions took quick wing. He resigned the presidency of the Elyton Land Company and went off to his Mississippi plantation. He returned to his city but once more. Late in the eighteen-seventies he entered the race for mayor of Birmingham. It was a hard, mean fight in which the colonel lost out. Dazed, stricken by the turn of things, embittered, they say, and feeling that all had gone back on him, he quit for good the town of his hopes and energies and autocratic ruling. A few years later, just about the time the Sloss furnaces went into blast, news reached Birmingham that old Colonel Powell had been killed. It was down in a Yazoo saloon, on one of the Colonel's plantations, that a young man, no one knew whom (some said out of revenge for an injury to his brother), had whipped out a pistol, and, without warning, shot the colonel to death.

CHAPTER XVII

LIFE SAVING MEASURES 1873–1878

Eureka Mining and Transportation Company of Alabama organized. Exceptional rights and privileges granted by State. Colonel Troy elected president. Oxmoor furnaces go into blast again. Enterprise of Levin S. Goodrich. "The little town of Birmingham was a graveyard." Biographical sketch of Mr. Goodrich. "The fools in Alabama are shipping ferruginous sandstone and calling it iron ore!" Judge Mudd operates Oxmoor plant. John T. Milner calls the men of Birmingham together. Association formed to make pig iron with coke. Details of organization of Coöperative Experimental Company. William Goold prospects in Warrior field. Discovery and first use of famous Pratt seam. First coke pig iron made in Alabama. Sensation of the district. Louisville and Cincinnati interests assume control. James Thomas appointed manager. Oxmoor plant remodeled. Sketch of pioneer furnaceman, James Shannon. Accomplishment of steady and successful reduction of Red Mountain ores. Reëstablishment of Geological Survey in 1873. University of Alabama again at the lead in this matter. Dr. Eugene A. Smith appointed State Geologist. Inadequate appropriation by State. Main results of Dr. Smith's great work.

THE Oxmoor furnaces remained shut down until the fall of 1873. That the chartered rights of the old company might be secured, a new organization, the Eureka Mining and Transportation Company of Alabama, was then effected; and the rights and titles to both the Eureka and the Red Mountain Iron and Coal Company were purchased. These rights bestowed upon the original incorporators by the legislature of Alabama were, according to Frank P. O'Brien, without precedent in the history of any corporation in the United States. They represented an extraordinary and practically unlimited power, including capital stock unlimited, perpetual duration, absolute exemption from personal liability of stockholders, exemption of all company properties from taxation for twenty years, barring a slight school tax, — all privileges that no amount of money could purchase at the present time.

The governing body of the new company was composed, in the main, of the former directors: George Gilmer, Charles T. Pollard, Daniel S. Troy, David Clopton, A. J. Noble, B. S. Bibb, and M. E. Pratt. Colonel Troy was elected president; A. J.

Noble, treasurer; T. S. Mount, secretary, while Levin S. Goodrich, old Daniel Hillman's grandson, and the only really practical iron man in the company, was engaged as manager and superintendent, in the place vacated by young DeBardeleben.

To make a ton of iron at this time in the Oxmoor furnace required 196½ bushels of charcoal. Goodrich reduced this amount to 123 bushels to the ton, and increased the output from eight tons to eighteen. The employment of a chemist, a distinctly fresh endeavor in iron making in Alabama at that time, was an incident of Colonel Troy's administration. Goodrich, it seems, was not an advocate of the "grading by eye" system, then in vogue all over mineral Alabama. He made a systematic examination of the ores that fed the furnaces, and in 1874 obtained Colonel Troy's consent to send various specimens to Dr. Wuth, a Pittsburg chemist. Following the chemist's report, Goodrich wished to attempt the reduction of these ores with coke. But the company had neither the capital nor the relish for experiments. It struggled on, barely self-sustaining. "Levin Goodrich's ideas were always of a positive nature," asserts Captain O'Brien, "and not a matter of conjecture, and they were sought by many for the same reason that a man whistles when he goes through a graveyard, to keep his courage up."

The little town of Birmingham was then practically a graveyard. Nevertheless, Goodrich saw a great future ahead of it, once they all started to making coke pig iron. "He always said," remarked Captain O'Brien, "that nothing could keep the Birmingham District from setting the price of iron for the entire world. He saw no reason why that which is happening in 1909 should not have happened in 1874."

Levin S. Goodrich had been in the iron business from his youth, as had his fathers before him. He was born in 1829, at the Old Kentucky Steam Furnace in Greenup County, the year his good old grandfather, Daniel Hillman, came into the wilderness of Alabama. Frank P. O'Brien has furnished the following account:

"In 1834 Daniel Hillman, Jr., and the father of Levin Goodrich left Kentucky and came to Reynoldsburg, in Humphreys County, Tennessee, and erected a furnace on the waters of White Oak Creek. To this furnace, rude in design and of small capacity, the name of Fairhaven was given. The following year the families moved to Dover furnace, in Stewart County, Tennessee. Here young Goodrich remained with his father and uncle until

Map of Alabama drawn by Eugene A. Smith, State Geologist

Heavy outline rules define principal coal and iron counties of the pioneer period. The three heavy dots indicate respectively the sites of Forts Tombecbe, Old St. Stephens, and Toulouse

1840, when they moved to Missouri, remaining there three years. By this time young Goodrich had gained some knowledge of iron making. He was required by his father and uncle to do every kind of work — from the cutting of cord wood, burning of charcoal, digging of iron ore, to the superintendence of the furnace.

"In 1844 there were no rolling mills nearer than Pittsburg, Pennsylvania, so the owners of the Dover and Bear Spring furnaces established one on the Cumberland River, above Dover. Daniel Hillman, Jr., and Dr. Watson purchased the Tennessee rolling mills in Nashville, which plant had long been idle and practically dismantled, and moved it to Kentucky, and began work in 1846, with Richard Fell. In 1848, after the death of Mr. Hillman's partner, Mr. Goodrich was given charge of the mill. Later, in 1848, George W. Hillman, who had been managing the Fulton furnaces, was put in charge of the rolling mill, and Mr. Goodrich was given charge of the Fulton furnaces. Here he remained until 1851, when he had three liberal propositions from outside parties to go into the iron business; but his uncle, Daniel Hillman, Jr., appreciating his worth, agreed to give him a fourth interest in the Mt. Ætna property. This proposition he accepted, and remained in constant control and operation until the furnace was blown out in December, 1854, because it was impossible to get the product to market. From Mt. Ætna, Mr. Goodrich went back to Centre, Kentucky, and took charge of the Centre furnace. While there he married Miss Louisa Ross Carter, daughter of Dr. B. N. Carter, himself an iron man of considerable character. The Civil War coming on about this time, Mr. Goodrich remained for a time in the iron business in Kentucky and Tennessee. [He made a tour of inspection through Alabama, as before noted.] In 1866, in connection with his brother, he purchased from his uncle, George W. Hillman, the Hurricane mill property in Humphreys County, Tennessee, where he remained until he located at Oxmoor in 1873."

Handicapped as the Eureka Company then was, having to make iron at more expense than profit, minus a market, minus expert labor, and minus even the timber for charcoal, every prediction of disaster pointed out to them by Henry F. DeBardeleben the year before at length confronted the company.

James Thomas was trying to steer Irondale furnace off the rocks. The so-called Birmingham District, so widely advertised by Colonel Powell, had become the laughing stock of the whole iron world. "The fools down in Alabama," it was said in Pittsburg, "are shipping us ferruginous sandstone and calling it iron ore!"

Judge Mudd and his two boys took the Oxmoor furnaces in

lieu of a debt due them for timber, and ran the plant for several months. A debt of $240,000 was now hanging over the property and the officers of the Eureka Company, turned fairly desperate, goaded by ridicule at home and abroad, made a public offer to turn over their furnaces to any man or any company of men desirous of proving that iron could be successfully manufactured in the Birmingham District.

"Just here," Frank P. O'Brien says, "those of us who had invested every dollar we possessed in Birmingham under the impression that the wealth untold that had been described to us by the promoters of the then infant city would, in a few years, make each one of us a millionaire, saw that something must be done to demonstrate the truth of the many claims made for this region. Who was the man to lead us out of this wilderness of despair? That man came forward in the person of Colonel John T. Milner. Colonel Milner sent out notices to 'All those who are interested in the success of Birmingham,' calling them to meet in the office of the Elyton Land Company, situated then in the second story of the building later known as the Bank Saloon, on the corner of First Avenue and Twentieth Street.

"This meeting was pretty well attended and was opened by calling Judge William Mudd to the chair, with Major Willis J. Milner as secretary. Colonel Milner stated the object of the call to be the formulation of a plan to organize a Coöperative Experimental Company, which would take advantage of the offer of the Eureka Mining and Transportation Company. He, on his part, would subscribe one thousand dollars in cash and a good sample of coal from three properties, to test its coking qualities. He called upon all others owning coal lands to take up the matter and do all they could to bring about some practical result which would demonstrate that our mineral deposits were not failures."

Major Willis J. Milner, secretary of the meeting, reports that after stating the purposes and the objects of the call for the meeting, Colonel Milner stood up and said: "We are confronted with a condition that calls for action on our part. We have been crying 'Natural resources,' and depending on others to come and develop them, like the man calling on Hercules to come and pull his wagon out of the mud. Hercules will not come until we put our own shoulders to the wheel. In my boyhood while at school I knew an old gentleman, a Jew, who by his wisdom and astuteness in business had accumulated a great fortune.

The old man seemed to take an interest in me, and said to me on one occasion, 'Boy, never deceive yourself, as many persons do. You may deceive others, but you must never deceive yourself. Always be sure of that. Now,' and Colonel Milner turned to the men, 'we are liable to deceive ourselves as to the value and quality of our natural resources on which we have so long been depending. We don't know what we can do. Let us find out for ourselves. We have been resting long enough on our natural resources. It is time we should be creating resources.'"

A statement from Levin S. Goodrich, giving the result of his investigations and his positive knowledge that success would follow the experiment of making iron with coke, was read by Major Milner. Mr. Goodrich himself addressed the meeting in a clear and reasonable talk.

The result was immediate. The organization of the Coöperative Experimental Coke and Iron Company was effected, and it adjourned to meet June 1 following for the purpose of hearing reports from committees to solicit subscriptions, and also to elect a board of managers or trustees. Power was given a committee, consisting of B. F. Roden, John T. Milner, Willis J. Milner, W. S. Mudd, and Frank P. O'Brien, to make such arrangements as would be equitable with Colonel Troy and the other officers of the Eureka Mining and Transportation Company, looking to the carrying out of the Troy proposition. The adjourned meeting reconvened June 1, and after hearing reports, a permanent organization was effected by the election of Colonel J. W. Sloss, Charles Linn, and William S. Mudd as a board of managers by the subscribers. At the same meeting Levin S. Goodrich was elected superintendent.

About this time a proposition was submitted by a Belgian named Shantle, for the use of a patent coke oven known as the Shantle Reversible Bottom Oven, which he claimed was the best system known for converting coal to coke. His proposition was accepted, and five ovens were built by Frank P. O'Brien under the supervision of the patentee.

Levin S. Goodrich, with the furnaceman John Veitch as his right-hand man, began at once changing the furnaces from charcoal to coke furnaces, also cold blast to hot blast by the introduction of Goodrich's Blast Furnace Feeder. Many other improvements were made.

Meanwhile, experiments with the various coals were under way.

There were then but four coal mines in operation in the Birmingham District: Newcastle, Warrior, Worthington, and Helena. There had been a little hole in the ground dug over what was then known as the Browne seam, out in the Warrior field, by Uncle Billy Goold. Several loads were sent down to the furnaces by ox team and the coal was found to be the precise quality Goold claimed it was. It beat every other coal then known in the district for coking purposes..

It seems that the year after Billy Goold had sold out in Shelby County and had essayed the cotton-broker's business in Selma, he "went busted," as he says. He then renewed his coal trade and opened what is known to-day as the Goold seam in the Cahaba field. He later went into partnership with Pierce, and helped him open his mine at Warrior. "Went busted again," said Uncle Billy, and he took to the woods prospecting. "Not one dollar did I have, and I dug night and day in the Warrior field, sometimes without food, for over two months. Then one day I struck a seam that made my heart thump for the thickness of it. I came then straightway down into Birmingham, and I went to see my friend, H. T. Beggs. He said he must take a look at the coal. He came and saw it, and he went into partnership with me. We bought one hundred and sixty acres, and I opened two drifts. At depth of one hundred feet I discovered coal four feet and eight inches thick. And good coking coal it was!" This was the coal later named the great Pratt seam.

Uncle Billy enlisted Major Peters, Mr. Pritchard, and Colonel Tate in the scheme. They put up a few dollars, and a pine-pole road was started into Birmingham. They then brought the coal to the attention of Colonel Sloss.

As far as the railroad business went in the mineral district then, affairs on the South and North were still in sorry shape. There was neither coal, iron, nor lumber for the road to carry. Neither were there passengers. For nobody ever went anywhere in Alabama in those days. Between Decatur and Calera there was not enough traffic to warrant the operation of a passenger coach once a week, nor to operate more than one freight car a day. There was no revenue from any source. The outlay of money to complete the railroad was money out of the pockets of the stockholders. Colonel Sloss, president of the unfortunate road, felt, with Albert Fink and John T. Milner, responsible for the extension policy of the Louisville and Nashville into Alabama,

and was naturally deeply concerned. The ownership of the Oxmoor property had at length reverted to Henry F. DeBardeleben, who now possessed the furnaces, and, as heir to Daniel Pratt, owned Red Mountain from Graces Gap to the town now known as Bessemer.

The experiment of making iron with coke seemed to every man in the district the last straw. Every eye was turned to Oxmoor. Colonel Sloss waited breathless. The rise or fall of the Louisville and Nashville in Alabama was involved in the experiment. If it were unsuccessful, then the South and North Railroad must be forever abandoned in Alabama. James Thomas, too, from over in Irondale, watched the experiment with nerves on edge. Blast furnaces in the Birmingham District must be given up if coke pig iron could not be made. The little group of men making up the Experimental Company were perhaps even more concerned. Their personal fortunes, and the life or death of the town of Birmingham, depended on the outcome at the Oxmoor furnace.

On February 28, 1876, the thing was done! Coke pig iron was made! Every statement of Levin S. Goodrich was proved true. For the first time in Jefferson County and in the history of iron making in Alabama coke pig iron was made, and of good quality. The Birmingham District, the Louisville and Nashville Railroad, and the town of Birmingham with all its citizens saw daylight. It was yet to be demonstrated, however, whether coke iron could be made at a profit.

Colonel Sloss and James Thomas did not lose a minute. They entered into negotiations with young DeBardeleben and with the directors and stockholders of the Eureka Mining and Transportation Company, looking to the purchase of the rights, titles, and interests of the company. After getting options on the property they at once organized a company comprising interests from Cincinnati and Louisville. Colonel Sloss represented the Louisville interest, consisting of Frank Guthrie, Victor Newcombe, Dr. Standifer, and others. James Thomas represented the Cincinnati parties, among whom were David Sinton,[1] D. B. Fallis,

[1] David Sinton of Cincinnati had made a fortune from pig iron during the Civil War. He eventually acquired majority stock in the Eureka Company and, at the time that DeBardeleben brought about the merger of the Oxmoor property with the DeBardeleben Coal and Iron Company, Mr. Sinton was practically the owner of historic old Oxmoor. David Sinton's daughter is the wife of Charles P. Taft, brother of President Taft.

Abel Breed, James Breed, and A. M. Brown, vice-president of the Merchants National Bank.

The charter of the Eureka Company was changed before the new parties came into possession of the property. Thomas at once began making changes, and during the next six months expended many thousands of dollars in the building of two new stacks, — the erection at Helena of one hundred coke ovens, and the building at the Oxmoor plant of an expensive battery of patent ovens operated by machinery. The capacity of the new furnaces was about four times as great as that of the old ones, and a much better quality of metal was the result. Furnace No. 2 was blown in March, 1876, while No. 1 was not completed until July of 1877.

"Topping its big stone jacket," said John Shannon, who began working as a water boy under foreman John David Hanby about this time, "was a fifteen-foot high iron work, making the furnace about fifty feet in height. No. 2 had three tuyères, but its daily capacity did not average more than twenty to twenty-five tons. John Veitch was head furnaceman, and my father, James Shannon, was his assistant."

Levin S. Goodrich returned to the iron business in Tennessee, revamped the Mt. Ætna plant for J. C. Warner of Nashville, and worked steadily at the iron trade until his death in 1886. He kept up his interest in the Birmingham District till the last, and watched its progress with eager eyes.

James Shannon was from across the water. Like Colonel Sloss, he too was Irish, but he received his training as a foundryman in England at the works of the great iron-master, Thomas Whitwell. He married a Lancashire lass when he was working as a top-filler in the Barron Furnace, and it was in Lancashire, 1867, that his son John was born.[1] James Shannon emigrated to the United States in 1874 with his family. He worked under W. R. Thomas in the Roane Iron Works near Catasauqua, Pennsylvania, and he was the first expert hand Thomas had been able to get. "Up to that time Thomas had been working nothing but Pennsylvania farmers at his furnaces, and they all used to quit him regularly when crops came into consideration." Shannon accordingly stayed with him as keeper, as foundrymen were then called. Thomas used often to speak of his brother James away

[1] John Shannon, the present-day superintendent of the Blast Furnace Department of Sloss-Sheffield Company.

down in Alabama, running an "old timey" iron works by the name of Oxmoor.

At length, being employed by Ex-Governor Joe Brown of Georgia and James C. Warner, president of the Tennessee Coal and Railroad Company, to build the Rising Fawn plant, W. R. Thomas left Reddington, taking with him his two "steadies," James Shannon and Tim Ginevan. Just as they finished the plant, they all got caught in the ebb-flow of the iron tide of 1876, when pig iron dropped from fifty dollars to thirty dollars per ton, and put them, as it put so many, to the bad. Shannon and his family went to Oxmoor.

At that time John Veitch was in charge of the furnace under Sloss and Thomas. They were beginning to have trouble with the Red Mountain ores. The furnaces kept turning out "silver gray," then accounted a "rotten iron." There was a limeset every little while for which every one was at a loss to account. Mr. Thomas sent for Peter Ferry, the St. Louis expert, to look into the trouble. Ferry came, bringing with him as his assistant, in August, 1878, a young Missouri boy named John Dowling.

Veitch had been making an iron too soft for the market, and Peter Ferry now got out an iron so hard and brittle that the furnaces got limeset again, and were worse than before. Mr. Veitch resigned and would not return, although Thomas sent a messenger for him and tried to persuade him. James Shannon was therefore made head furnaceman.

Shannon had been doing a little thinking of his own, and he had discerned the root of the difficulty. It seems that in the continued workings at the Red Mountain mines, the surface, or soft ore, had gradually been used up, and the hard ore, with its additional lime, was being used in the furnaces, with the same quantity of lime applied to the soft ore. It was a perfectly simple matter, therefore, merely to use less lime and a mixture of both soft and hard qualities of ore. Putting his theory into practice, James Shannon thus accomplished the steady and successful reduction of Red Mountain ores to the grade of pig iron then in demand.

From that time on Shannon was looked upon with new consideration, and was associated until the day of his death with many iron-making enterprises in Birmingham. He was eventually employed by Underwood and DeBardeleben to operate Mary Pratt furnace; he then went to the Williamson and Bessemer

furnaces, and finally to the Big Four at Ensley, where he died in harness in 1897.

A matter of signal interest and importance to Alabama during the early eighteen-seventies was the reëstablishment of the Geological Survey. After the death of Professor Tuomey, in 1857, the survey was discontinued. But the University of Alabama, in 1871, again took the initiative just as it had done formerly in the matter of the first State survey, requiring the Professor of Geology to devote as much time in traveling over the State, in making examinations and collections in geology, as would be consistent with his duties at the university.

Dr. Eugene Allen Smith was then, as now, Professor of Geology of the university. He was then about thirty years old and had been serving for three years as assistant State Geologist of Mississippi.

Although born in Alabama (in Washington, Autauga County, October 27, 1841), Eugene A. Smith's forebears were all from New England, being of the families Bradford, Phelps, and Allyn of Massachusetts and Connecticut. He is a lineal descendant of Colonial Governor William Bradford. His father was Samuel Parrish Smith and his mother Adelaide Julia Allyn. His first schooling was at Prattville, the town founded by Daniel Pratt of New Hampshire. After a few years' study in Philadelphia, and again at Prattville, Eugene Smith entered the University of Alabama, and was graduated in 1862 with the degree of A.B. Enlisting at once in the Confederate army, Thirty-third Alabama regiment, infantry, he served about a year when he was detailed by President Davis as Instructor in Military Tactics at the University of Alabama. At the war's close he went to Germany, and was at the University of Goettingen and the University of Heidelberg, from which latter he received the degree of Ph.D. in 1868. Returning to the United States, Dr. Smith accepted the position mentioned in the Mississippi State Survey, and in 1871 accepted the chair of Professor of Geology at the University of Alabama.

He conducted the survey without compensation, as had Professor Tuomey, a good part of the time. An act was passed by the legislature, however, in 1873, reviving the State survey and making an inadequate appropriation for expenses. In 1877 and in 1879 certain additional appropriations were made, but the services of the geologist were given without compensation until 1883. Mr. Henry McCalley, assistant in the chemical depart-

ment of the university, accompanied Dr. Smith in the field in 1878 at his own expense, and undertook for several years thereafter independent field work. There were other volunteer assistants at this time, among them Mr. Truman H. Aldrich and Professor W. C. Stubbs.

Dr. Smith was honorary commissioner from Alabama to the Paris Exposition, 1878; special agent of the tenth census on cotton culture in Alabama and Florida, 1880; member of the American committee of the International Geological Congress of 1884–89; member of the Jury of Awards at the Atlanta Exposition of 1895, and of the Nashville Centennial of 1897; and delegate to the International Mining Congress in Boisé City, Idaho, 1901.

As State geologist, Dr. Smith has performed permanent and invaluable work in the exploration of the vast and varied mineral resources of Alabama. His voluminous official as well as his fragmentary reports and writings for the press have given to the world proof of the mineral wealth of the State never before known, and have contributed an immense share to the mineral development itself.

The main features of the geology and resources of every county in the State have been ascertained by Dr. Smith, and descriptions of each county have been published. The main sub-divisions of the geological formations in the State were established by him; the mode of occurrence and general distribution of the most important mineral resources were described and illustrated by many analyses; and the agricultural features of the entire State also given.

Some of the regions in which the mining of coal and iron came to assume vast proportions were untouched by the pick of the miner when Dr. Smith directed attention to them.

CHAPTER XVIII

BIRMINGHAM MILITANT 1876–1880

Crisis in coal business. Troubles behind the scenes of Eureka company. Incoming of Truman H. Aldrich, first of the big pioneer coal operators of Alabama. Review of his career. Interesting points in Aldrich family history. Antebellum conditions as depicted by John T. Milner. Résumé of Montevallo history. An unprecedented act: digging coal in midsummer. Succession of coal seams in Warrior field ascertained. On a still hunt for coking coal. Extent and full value of Pratt seam demonstrated by Aldrich. Acquisition of coal lands. Combination of Sloss, DeBardeleben, and Aldrich. Pratt Coal and Coke Company first large coal company of Alabama launched. Pratt mines opened. "The sound of the hammer and the saw is heard again in Birmingham." Gathering of forces for leadership. Foundations for city of Birmingham laid on cheap coal. Success of Pratt mines. Start of industrial development. Points of policy affecting future generations settled by pioneers. Operation of mines limited to the individual. Mileage and freight rates fixed. Encouraging conditions of Elyton Land company. Recollections of Captain A. C. Danner. Birmingham becomes center of industrial life of State. Policy of M. H. Smith, president of Louisville and Nashville railroad. His durable and splendid public work.

ALTHOUGH the happy termination of the trials of the Experimental Company promised daylight, as has been seen, it was misty weather that followed, after all. The progress of the new Eureka Company suffered because the Louisville and Cincinnati factions controlling it could not come to an agreement on any proposition either of policy, financing, or operation. DeBardeleben held on to the small block of stock he had retained at the transfer of the properties. Each of the syndicates, looking towards majority control, desired to purchase it. "But I would not sell," remarked the colonel. "I knew if either party got full control the property would go to pieces again. So I stayed umpire to keep the peace."

DeBardeleben was then not much on the Birmingham ground. He was up in Jackson County more or less with Eugene Gordon, looking for coal. For by this time Henry F. DeBardeleben had contracted the fever of prospecting, — the hunger and the urge for the field that has never left him from that day to this; curiosity, indeed, to read the book of the ground and eagerness to

suck profit out of the ground. He had quit the cotton gin works at Prattville for good and all and plunged head first into the coal fields.

Colonel Sloss, too, was diving around for coal. Neither the extent nor capacity of the seam of coal discovered by Billy Goold had been determined in 1877. The coal at Helena was not adapted for a really first-class coke, and at any rate, was getting thin and faulty, and had begun to play out. Montevallo coal was solely of domestic grade. Up to the launching of the Helena mines Montevallo had no formidable commercial rival, but had things quite its own way, as its owner, Truman H. Aldrich, ordered. Sighting the horizon and foreseeing a crisis in the coal business of the State, as well as in his own holdings, Mr. Aldrich came up from Montevallo, where he had been located for five or six years, to the Birmingham District in 1877, on a still hunt for a steam and coking coal.

The name of Truman H. Aldrich heads the list of the first big coal operators of Alabama. No scientific or genuinely practical methods were applied to coal mining in this State until the early eighteen-seventies when Mr. Aldrich came into the field. He was a graduate in mining and civil engineering of the Van Rensselaer Polytechnic Institute of Troy, New York, of the class of 1869, and was one of the first mining engineers and technically trained men in the South. Among his college fellows and fast friends was Frank Hearne, for whom young Frank Hearne Crockard, vice-president of the Tennessee Company, is named. Another Troy man besides Truman Aldrich, who was identified with the coal and iron industry in Alabama, was Michael Tuomey, who belonged to a class of the generation before. Although Mr. Aldrich is a New Yorker by birth, his family tree is old and deep-rooted in New England soil. For three hundred years his folk, mainly Quakers, have been teachers, lawyers, bankers, and writers; the scholar vein, indeed, well-worked. Of note in the present generation among his kin are Thomas Bailey Aldrich, the author, and Nelson W. Aldrich, United States senator from Rhode Island. The name is, indeed, part of the backbone of New England history, past and present. The family was originally Amsterdam Dutch, and points of physiognomy have not been lost. Truman H. Aldrich has the large, heavy, strong-molded features of the nation and is in physical make-up the characteristic Dutch type. He is stubborn, too, in the right; he is practical and square, and

applies the touchstone of common sense to his every undertaking. He strikes hand of fellowship with very few, and he makes no friends except to keep. Quick to speak his mind, he is yet quicker on a point of humor; altogether, a jolly, vigorous, robust, and constructive make-up, that has been good for the times and the place in which his lot has been cast.

The Aldrich starting point in this country was in the State of Massachusetts, where, in 1669, George Aldrich and a group of other men, among them Robert Taft, ancestor of President Taft, founded the town of Menden. Truman Aldrich's father, William Farrington Aldrich, left Massachusetts for New York State early in the eighteen-forties to practice law. He married a girl, also of English-Amsterdam stock, Eugenia Klapp, a great-granddaughter of the fourth Lord Fairfax, and settled at Palmyra, Wayne County. Here on October 17, 1848, their son, Truman H. Aldrich, was born.

Ill health during early childhood led to the family physician's prescription of outdoor life for the little boy, which circumstance incidentally pointed the way to much of his life work. The good old doctor, it seems, was quite a scientist in his way, — a great collector of shells, stones, plants, fossils, and all sorts and kinds of botanical and geological specimens. Every day, regularly, he took little Truman Aldrich out with him in his long country drives to his farm patients. He talked so much about his hobby that the little boy caught it, and even began to dream about shells. He soon started a collection of his own that he added to for forty years. It was the nucleus of Mr. Aldrich's present-day interesting exhibit, which contains fifteen thousand different kinds of living shells and ten thousand different kinds of fossil shells of the Tertiary period. The knowledge gained in this particular pursuit became an important asset to Mr. Aldrich in his future geological ventures, and, moreover, of significance to the Alabama State Survey.[1]

This boyish pursuit, set afoot by the old physician, was kept up for several years, and young Aldrich was eventually equipped with a fairly well-defined knowledge of botany and geology.

[1] "With the small amount appropriated for the State survey it would have been injudicious to use any of it on paleontology, but Mr. T. H. Aldrich contributed, without cost to the State, Bulletin No. 1, published in 1886, containing descriptions of new Tertiary fossils, with nine plates of illustrations. This is the first installment of what is designed to be a complete and illustrated account of our Tertiary paleontology." — E. A. Smith, *State Geologist.*

TRUMAN H. ALDRICH, PRESIDENT OF MONTEVALLO COAL COMPANY

First of the Great Pioneer Coal Operators of Alabama

By the time his father entered him at the military academy at West Chester, Pennsylvania, in his sixteenth year, Truman Aldrich had a decided taste for scholarly and scientific pursuits, for precise and exact knowledge, and shortly entered the great Troy school.

After completing the course at the Polytechnic Institute, he engaged in civil and railroad engineering in New York and New Jersey. In 1870 his marriage to Miss Anna Morrison of Newark, New Jersey, took place. Two years later, deciding to go into partnership with George A. Morrison, his wife's brother, Mr. Aldrich set out for Alabama and embarked in the banking business at Selma. No sooner had he helped launch the Selma bank than he went out prospecting, and took so keen a fancy to the Montevallo coals that he decided to quit banking and embark in the coal business. In 1873 he leased the famous Montevallo mines. "I knew," he has declared, "just about as much about practical coal mining then, as a horse about holy water."

The banking business all over the State was then at low ebb in its fortunes, for the country, everywhere, was hard up. It was the Alabama bankers' custom to loan large sums to the cotton planter to make his crops and to the cotton broker to move the cotton bales. If a good cotton year followed, those moneys could be returned, but if it was a bad year, the result was invariably bankruptcy.

Milner wrote at this time:

"Alabama has appeared before the world, since the war, only in the tattered garment of disappointment, distress, and despair. . . . It has been asked how the people lived. Go, look in the book of mortgages and deeds at your courthouses, and you will see! . . . Want and gaunt, haggard despair have prevailed everywhere in the Black Belt since 1867. A sadly dark cloud settled then over this part of Alabama, and from that time until now this section continued to grow poorer. . . . Alabama is making her first marks in mineral development. . . . Pennsylvania is now the leading State in production of mineral values and will continue to be so in coal product for generations to come. But in iron Alabama will be up and even with Pennsylvania in less than twenty years.

"There is nothing wanting here in central Alabama but capital and labor, and now negro labor does better in coal and iron business than in farming. Whilst houses, fences, and everything have gone and are going to ruin and decay, the poor farmer can only get advances to make cotton. These advances all come from the class of non-producers, and are made for the purpose of keep-

ing their commissions and other business alive, and not for the benefit of the producer. If this business of advancing on cotton should stop in the Black Belt for one year, all farming would cease. Such is the condition of the counties along which the South and North road passes. Something must be done, and that soon. Either the army of non-producers must break ranks and fall to the ground and go into the fields, or somebody must starve in Alabama.

"The country looks now as if it had just passed through the shackles of . . . No fences, no hogs, no cattle, no agriculture, no nothing. Bald, barren, uncultivated, and washed spots are seen everywhere. With the record of 1870 in his pocket, an immigrant will stand on the edge of this once beautiful, but now dreary and uninviting, region, and hesitate to cast his hopes and his fortunes here. The white people here now all belong to the now superabundant non-producing class and will work nowhere in the fields. They are educated and born non-producers, and cannot and will not labor in the fields. The products of the soil of Alabama do not sustain and support the population of the State at this time. The large farmers are broke everywhere. Not one in a hundred makes a crop now without mortgaging for his year's support and supplies. Farm after farm, acre after acre, is eaten up in this way, until now it is hard to ascertain to whom the lands in Alabama really belong.

"Bitterest cup of our woes! Darkest pages in the history of Alabama! A conquered people of the white race ruined by results of a great war, struggling for bread in midst of a social problem suddenly given over by the mailed hand of power to the rule of a people but yesterday their slaves. . . .

"But I do protest in the name of my State to hanging this skeleton on the wall and calling it Alabama! Say she is sick! Say she is not well, tell what is the matter with her; or at least hang around her the old pictures of her former self and her daughters, the counties of Autauga, Montgomery, Lowndes, Macon, Dallas, of Madison, of Marengo, aye, and the little county of Jefferson, comely, handsome, and full fed as they then were. . . . Once the wonder of the agricultural world, now groveling in the dust and her children selling their birthright for bread. . . . Are there no more Daniel Pratts from the grand old Granite State to catch our flying streams and turn them into power?"

Mr. Aldrich's survey of this aspect of the horizon, as much as his natural inclinations, caused his decision to enter the Alabama coal mining fields permanently. "Mining operations over the State then were pretty small potatoes," said he. "Montevallo, mind you, a small potato, too, like the rest of 'em. Why, the average carload of coal from 1873 right along until 1879, when we opened Pratt mines, was only eight tons. If I

ever loaded ten tons on a car, by mistake, I had to unload, for it was considered too heavy for a locomotive to pull!" And now, in 1909, it is fifty tons to the car.

No sooner had he leased the Montevallo mines, than he set his men to digging coal, although it was midsummer. The act was unprecedented. Not in the forty years that coal had been dug in Alabama had any man done such a thing as mine coal in the summer time! But then, it was said, this Aldrich was a Yankee, and no one ever knew what a Yankee would do next. For "the personage autochthonic" Truman Aldrich began to conceive a mild and beneficent, if slightly scientific, interest. He hugely enjoyed the amusement and curiosity excited by his stacked-up coal, for before autumn, the coal was in big pyramids, all over the scrubby field, near the main entry. It kept piling up and the joke spread, for never a soul bought so much as a hat full. The store kept things going. Then, all at once, first frost came. Everyone, of course, then wanted coal right straight off. Mr. Aldrich found he had the corner on the market. He responded on the instant to the demand of not only the immediate community and the surrounding counties, but he even began shipping coal all over the State, and drove out the English coals in the southern section and sold Montevallo coal in larger quantities than had ever been done before.

The Montevallo mines, so long the main pivot of coal operations in the State, now began to take on the genuine professional aspect, became the one real coal mine of Alabama in 1875. For T. H. Aldrich it netted a little income of $10,000 per annum. In 1909 its output is about forty thousand tons yearly, and it has ever been a good paying property. Having proven a success the property was purchased outright by Mr. Aldrich. Helena coal mines, looming up about this time, threatened the prosperity of Montevallo, so Mr. Aldrich leased his mine to his partner, Cornelius Cadle, and to his younger brother, William Farrington Aldrich, Jr., and started out on his hunt for a coking coal. Associating with him Joseph Squire and Marshall Morris of Louisville, he struck out into the Warrior region. They discovered the Jefferson and Black Creek seams and sunk the first shaft mine of Alabama over these rich coals. They got coal fever, indeed, and continued surveys, tests, and operations at various points in both the Warrior and Cahaba fields.

The succession of the seams in the vast Warrior coal field, had,

up to that time, never been scientifically ascertained. In spite of the fact that coal had been dug in that field since the eighteen-twenties, and that the several mines already mentioned were then in operation, the great basin remained geologically unknown. Truman Aldrich set on foot, therefore, the first thorough survey and systematic exploration of the Warrior field that had yet been attempted. Employing Joseph Squire, "the lone scout," as his assistant, Mr. Aldrich started at Newcastle and worked southward along the edge of the coal field, while Squire searched along the South and North and the Alabama and Chattanooga railroads with instructions from Mr. Aldrich not to go out of a six-mile limit of the two roads, "and to find the best location on which to open a large coal mine between Tuskaloosa and Birmingham, and between Calera and Decatur." There were three main points Mr. Aldrich wished to determine: First, if there existed in Alabama a genuine first-class coking coal thick enough to be worked economically; second, if there was a sufficient area of this grade of coal to last a long time, and justify heavy expenditure; thirdly, to find if such coal existed in reasonable distance from the Oxmoor furnaces, that would be available for the use of both the railroads, without constructing too long branch lines. The Newcastle seam was too dirty to make coke, and was not in favor with the railroads as a steam coal. Furthermore, it was supposed to be identical with the Browne seam, when, as Mr. Aldrich shortly discovered, it was many hundreds of feet below the Browne seam.

Colonel Sloss, likewise, had an intelligent appreciation of what was needed, and was out in the field with precisely the same points in mind that Truman Aldrich had. It was inevitable that the two should meet. Colonel Sloss, learning of Mr. Aldrich's geological investigation, in the summer of 1877, approached him with a proposition to the effect that they form a partnership and continue the survey in their common interests. This was done. As basis for operations, $30,000 was raised, purchase of lands carrying the Browne seam was begun by Aldrich, and work in the field was continued. This Browne seam was found to satisfy the three needs uppermost in the district; it was fine coking coal of uniform thickness; it covered a tremendous area, and it was available for the furnace and the railroads.

Returning to the Birmingham District in the fall of 1877, with

no coal to brag over, DeBardeleben was invited by Colonel Sloss and Mr. Aldrich to take a look at the Browne seam and enter the partnership. DeBardeleben saw then that this coal was not only the life-line for the Eureka Company, but for the town of Birmingham as well. He joined, therefore, and straightway doubled the capital.

As successor to Daniel Pratt, Henry F. DeBardeleben was then the one big-moneyed man in this portion of the State. With a fortune at his command he was free as the winds. The color of the picturesque, the tinge of the dramatic, in his personality had become by this time more deeply accentuated, and his Hessian energy and imagination were more lively. His ambition to be in the lead in something was already urging him on. He joined hands then with Sloss and Aldrich. Mr. Aldrich says, "he put the whole power of his fortune, his credit, and his tremendous vitality for the advancement of the company."

More properties were immediately gathered together. Coal lands in the Warrior basin to the amount of thirty thousand acres were bought, the price varying all the way from one dollar and a half to fifty dollars per acre. Uncle Billy Goold let go his little eighty-acre slope directly over the Browne seam. "Sold it for a song!" said Uncle Billy, "and Aldrich and DeBardeleben, they put the tune to it!" The vast Warrior basin was wild woods then as it is to-day. Many a field of blackjack and tough pine trees is there, and bold, steep knolls, sharp up and down, and low hollows where the streams, thick with the wastings of the coals, run black as the river Styx. All through the western counties lies this coal land, named centuries ago "Field of the Black Warrior," for the tall Indian chief who fought the *adelantado*.

The rich Browne coal seam was found, by Mr. Aldrich, to underlie the vast field for miles and miles. Its name was at length changed from Browne to Pratt in honor of Daniel Pratt, whose moneys were to be used in its first large development. The company then organized in January, 1878, was called The Pratt Coal and Coke Company. It was the first big coal company formed in Alabama. Its original officers were H. F. DeBardeleben, president; J. W. Sloss, secretary and treasurer; T. H. Aldrich, superintendent and mine manager. To the camp near the mines that shortly developed into a town, the name Pratt City was given. This section is to-day a part of Greater Birmingham.

In 1902 this name, standing for so much in Alabama industrial

history, was given to the largest commercial coal company of the State, The Pratt Consolidated Coal Company, officered by George B. McCormack, Erskine Ramsay, and H. E. McCormack. Every part and parcel of the holdings of the original Pratt Coal and Coke Company is owned to-day by the Tennessee Coal, Iron and Railroad Company (a subsidiary of the United States Steel Corporation) which is officered by George Gordon Crawford and Frank Hearne Crockard.

The Pratt Coal and Coke Company started railroad construction simultaneously with their mining operations. A slope was sunk in bowshot distance from Goold's original entry, and Joe Squire, Billy Goold, and Ed Lacey (afterwards a physician in Birmingham) were among those employed to handle the preliminary work. The railroad was finished and the first coal was shipped by the Pratt Coal and Coke Company, in February, 1879. "Then," says John T. Milner, "and not until then was there any sign of life in the city of Birmingham." Said DeBardeleben, "I 'll never forget in my life how the very week after we began grading our railroad, the sound of the hammer and the saw was heard again in Birmingham."

But for the opening of these Pratt mines the little town of Birmingham might indeed have utterly collapsed. Although two railroads mingled their energies upon its ground, they got no sustenance. Cattle grazed upon their tracks. Although millions of tons of iron ore flaunted wine-red in the very face of the town, Red Mountain served as but fruit to Tantalus and the far, long swell of the Warrior coal fields, indeed, as the bitter, receding waters. Although two furnaces in Shades Valley had made brave trial, neither had been able to carry its own weight, much less lend hand to the struggling town. The panic of 1873, like a sharp wind, had blown out of the whole district its stamina. What had seemed daylight was but mirage of dawn. Now a breath of relief came. Under the three men who are always spoken of to-day as the captains of the Old Guard, DeBardeleben, Sloss, and Aldrich, the town began to be builded anew, and gathered forces for its start in the race for leadership of the new industrial South. The foundations of its future were laid by them on a solid bed of coal and coke. "Cheap coal," said DeBardeleben, "that every town needs for a starter. And it was through T. H. Aldrich that this Pratt coal, the best coking coal in the State, became widely known and opened up to commercial use."

1. First Shaft opened at Pratt Mines
2. Slave Quarters Old Hawkins Plantation, on Republic Iron and Steel Company's Land
3. Site of Adams Dam Forge on the Little Cahaba

Every asset the three men had they threw into their company. They and Samuel Noble, over across country in Calhoun County, were the first men who had the grit to toss every cent of their means to develop the untested mineral country. The three in question, from the beginning, conceived an outline for the Birmingham District of superb dimensions, such as would, in fact, have taken millions upon millions of dollars and many a year to bring about.

"D' ye know, Henry F. DeBardeleben," said old Joe Squire to the colonel, one day in 1909, "d' ye know I thought y' was a born gambler in those old days."

"So I was, Joe," replied DeBardeleben. "So I was! It took that to make the country go."

DeBardeleben's part in the Pratt Coal and Coke Company was like that of Andrew Carnegie for the Carnegie Company, "to drive the band wagon," to work, "on the outside." He hunted the men to buy the coal and coke, built up a solid market, and got steady and reliable consumers. "DeBardeleben was always a great trader," Aldrich has observed, "and he always had the courage to buy. He was a fine promoter. He got the money we needed, the people, and the lands. The immediate success of Pratt mines for steam and coking coal fixed as a certainty in the minds of men the enormous value for future development possessed by the Birmingham District. The modern start of industrial development of this entire section dates from the successful test of the Pratt coal. As soon as DeBardeleben grasped the fact that we had here a first-class fuel, he bent his energies to putting in diversified industries. He started furnaces, iron works, mines, rolling mills, and every sort of industry possible to promote the district and to use our coal. His energy and ability in this line were, as a matter of fact, nothing short of miraculous."

Meanwhile Mr. Aldrich got out the coal. He stayed at the camp, slept in a log shack near the commissary, and managed the mine, the railroad, the men, and the machinery — all the detail work. He also attended to the surveying and engineering, and kept up what he calls his "geologizing." He worked night and day. The three men all worked eighteen hours a day for nearly three years. They made a success of the mines and the money began to come in. Slope No 1 soon produced seven hundred tons daily. Slope No. 2 was begun and shaft No. 1 sunk.

In reference to freight rates at this period Captain A. C. Danner says:

"I told Mr. DeBardeleben then that if he would deliver the coal on barges at Montgomery, I would contract with him for fifty thousand tons per annum, I furnishing the barges and towboat, receiving the coal at Montgomery, then carrying it down by water and undertaking to market it at Mobile. I thought the cost at Mobile this way would be so much lower than we had been paying that it would greatly increase the demand.

"Mr. DeBardeleben took this matter up with Mr. Stahlman, then in charge of the freight department on the South and North Railroad, and made an agreement with him for a low freight rate from those mines to Montgomery. DeBardeleben went to Montgomery and purchased a piece of water front, where he intended eventually to erect a tipple for the handling of coal from cars on to our barges. Before we were ready to go into it, the Louisville and Nashville Railroad Company had secured control of the Mobile and Montgomery Railroad Company, and repudiated the freight arrangement entered into by Mr. Stahlman. They would not permit the coal to be taken to Montgomery at the low rate of freight agreed on, nor did they want it dumped on to barges on the Alabama River; but, as a compensation for preventing the carrying out of the arrangement made between DeBardeleben and myself, they reduced the rate freight on coal to Mobile from $2.50 to $2, which then seemed low."

Captain Danner had the exclusive handling of Pratt coal until late in the eighties, when the management of the company changed.

Many points of policy were settled by the Pratt mines developers in the coal and iron business, by which mine operators of the present day and of the State in general are the beneficiaries. There was in the first place the question as to whether the operation of coal and iron mines should be taken up by railroad corporations or limited to the individual; secondly, whether mileage or freight rates should be charged for branch railroad tracks to carry coal, and what mileage charge for use of the cars should be paid in case rates were charged; thirdly, the question of carrying passengers. The first problem, made issue of the Interstate Commerce law in 1907, which prohibits coal operation by railroads, was settled, so far as the State of Alabama was concerned, in 1880 by M. H. Smith, T. H. Aldrich, and H. F. DeBardeleben at a conference held out at the Pratt mines. The railroads in Alabama then owned immense tracts of mineral lands and were projecting mining operations. Foreseeing the economic mix-up

stirring then for the future, M. H. Smith laid down the policy then and there that railroads stay out of the coal and iron business. Better that the railroads get rid of their lands, even at a loss, he held, than jeopardize conditions for the State at large, and freedom of the industry. As for the second problem, they stopped the mileage business, deciding that no charge should be made for hauling loaded cars from the mines, or empty cars back, providing the connecting railroad charged no mileage for use of their cars. They also fixed the rates of passenger traffic. No facilities in any line existed then for the coal operator. Everything had to be built clean up out of the ground.

At the time the first coke pig iron was manufactured (1876) at the Oxmoor plant, the Louisville and Nashville Railroad, through M. H. Smith's action, had invested $125,000 in the experiment. The result was stupendous. The coal mined and shipped over the South and North railroad for that year, ending July 1, was, according to John T. Milner, ninety-seven thousand tons. The coal business on the line of this great thoroughfare continued in a growing and healthy condition throughout the early eighteen-eighties. "This success is due mainly," says Milner, "to the great effort now being made by the railroad management to forward and develop this business."

Colonel Sloss resigned from the Pratt Coal and Coke Company late in 1879, to give his attention more exclusively to iron making. He was always tenacious, however, as to the ownership of Pratt coal lands. An anecdote related of him was his threat to Colonel Milner, who in his zeal for a good coal chanced one day to trespass on Pratt properties.

"Milner," said Sloss, "is it for peace or war you 're looking?" Colonel Milner paused. He knew right well how James W. Sloss could fight. He figured out whether he could afford the battle. "Well, I reckon it 'll have to be peace, Colonel," he drawled, and withdrew his forces.

Down in Montgomery, one day, not long after this, when results began to show up all over the Birmingham District, Colonel Milner ran across his old friend Albert Fink, who had run down from New York, where he had located after his retirement from the Louisville and Nashville Railroad. The big Dutch railroad man who had so blessed out the engineer back in the early seventies was at the depot, and just about to board the train for New York. He dropped his valise and umbrella and fairly ran up

to John T. Milner. He took him by both hands: "Mr. Milner! Mr. Milner!" he cried, "I haf been only too anxious lately to meet you vonce more! I want to take back all that cussing I vas giving you once. The Louisfille und Nashfille Railroad has become von grand success!" Colonel Milner says, "That was the last time I ever saw Fink!"

As the various events and incidents bearing upon this subject revolved in the earlier periods about one particular point, — first around St. Stephens and Mt. Vernon, then shifted from one county to another of the mineral region, and concentrated at length at Selma, — so from the establishment of the Pratt Coal and Coke Company every big event of industrial and commercial interest of middle Alabama circles around this one town of Birmingham. The initial meeting in Alabama of the American Institute of Mining Engineers in 1878 was an event of importance at this period. T. H. Aldrich was the first Alabama member of this society. Conditions grew more encouraging from day to day. The Elyton Land Company once again found ready sales for its property. By the winter of 1880 its stock had reached par. Three years later it was called in and all its bonds canceled. It began to pay its first dividends. By 1884 the stock reached five hundred premium, and was then retired from the market because the stockholders found it was too good a thing to sell. The company adhered to Colonel Powell's policy in certain lines in the donation of lands for municipal purposes, and the general outlook of the city's progress became brighter along with their own.

This great practical development of the Birmingham District could not have transpired without the coöperative policy and stalwart encouragement to the pioneer coal and iron men given by M. H. Smith. His hand, back of the Louisville and Nashville Railroad management, was the great shaping force. During the War Period the name of M. H. Smith was introduced in these records as yardmaster for the old Memphis and Charleston stationed at Chattanooga. Directly after the war he served for a short time as superintendent of a part of the Alabama and Tennessee River Railroad (Selma, Rome, and Dalton), which was his first active connection with any Alabama road. He then returned to Louisville, and from 1868 on, until the early eighteen-seventies, he held post with the Louisville and Nashville successively as freight agent, assistant general freight agent, and general freight agent.

In 1871 Mr. Smith revised the local tariff of the Louisville and Nashville Company, and completely changed the formula, making the first book tariff ever used in the railroad freight business in the South. Instead of a sheet tariff pasted on the wall beside the bill of lading clerk, he devised a method that greatly facilitated matters, by binding all the rules, regulations, and classifications in one volume — a very simple device, but not then known in the South. Mr. Smith had previously made a great reduction in the rate on fertilizers, placing them the very lowest in the tariff rates. This was done to encourage the consumption of fertilizers and so increase production. With brick and stone fertilizers have ever since been placed in the lowest class in the local tariff of the Louisville and Nashville. He also made low rates on pig iron for the Oxmoor furnaces and instituted the first sliding scale rate ever made in the South for this plant in the early seventies.

Shortly after Colonel Sloss took charge of the Oxmoor furnaces Mr. Smith resigned for a few years' interval, to take the position of traffic manager of the Baltimore and Ohio Railroad. He returned shortly, however, to his former road, the Louisville and Nashville, and in 1880 was appointed traffic manager. Two years later he was made chief executive officer of this railroad, which position he has held continuously through a period of twenty-eight years.

It was M. H. Smith who gave his active coöperation, encouragement, and assistance to Captain A. C. Danner, in the introduction of Alabama coal into New Orleans. Captain Danner, who is now president of the Mobile Coal Company, says:

"Along about 1874 the Alabama mines began to turn out more coal than there was market for. Very low water prevailed for a long time in the Kanawha and Ohio rivers, thus preventing the floating down of Pittsburg coal, and during a storm in New Orleans a great many barges of Pittsburg coal were sunk. I decided that there was an opening in New Orleans for the sale of Alabama coal. An arrangement was made between the Louisville and Nashville Railroad Company and my firm making a rate through from the mines to New Orleans of two dollars and twenty-five cents per ton. A yard and office was established in New Orleans, and we went to work to sell coal from the Alabama mines there. The people of New Orleans had not then been accustomed to use any coal excepting Pittsburg coal. There were many dealers in Pittsburg coal in New Orleans, nearly all the large mines in the Pittsburg district having their local represen-

tatives there. They, of course, combined to fight the introduction of Alabama coal into that city. Much prejudice was. in consequence, engendered against it, some of which lasts until this day.

"We had a hard time selling Alabama coal there, but the trade grew, nevertheless, year by year. I remember one sale that I, personally, made in New Orleans that was rather startling at that time to the coal trade. The Gas Company of New Orleans then made gas from Pittsburg coal. They had used it a long time, and it was understood that there was no coal that would answer for gas making purposes but this Pittsburg coal. The Pittsburg people never for a moment thought that there was any danger of their losing their trade.

"The president of the gas company was induced to make a test of the Black Creek Alabama coal from a mine that had been opened and was being operated by Colonel John T. Milner. This test in its results surprised the gas company. They made a further test, and then one day closed a contract with me for twenty thousand tons of Black Creek coal. That, so far as I know, was the first large sale of Alabama coal made in New Orleans, and it was a great help to the trade for our coal. We had been trying to sell some of it to the railroads. Of course, the railroads running through the Alabama coal district into New Orleans used it, but the railroads running out of New Orleans to the West or to the North would not have it. Colonel Milner went to New York and succeeded in getting from the president of the Southern Pacific Railroad Company an order for a large amount of coal, but when it was being delivered to the railroad company there was almost a strike on the part of the engineers. They claimed that they could not run their locomotives with Alabama coal! The management of the railroad company finally put up a notice to the effect that as engineers on the Alabama, Mississippi, and Georgia railroads could use to advantage Alabama coal, any engineers on the Southern Pacific who could not use it and get results from it would be considered incapable and their places filled by more competent engineers. That ended the 'kick' against Alabama coal from that source, and from that day until this the Southern Pacific and other roads running out of New Orleans have used more or less Alabama coal, and the use of it in the country adjoining has steadily grown, year by year, to the great advantage of not only the Alabama mines, but of New Orleans as well."

At the date of the opening of Pratt mines M. H. Smith was traffic manager of the Louisville and Nashville and, as noted, outlined, together with Aldrich and DeBardeleben, the far-seeing railroad policy adopted a generation later by the nation itself. Not only did he give low freight rates to the coal and iron men, but he built the Birmingham Mineral Road in the early eighteen-

eighties, and constructed branch roads out to the raw materials in every direction; he granted credit; he advanced money; he supported progressive enterprises; he gave facilities in every way to the builders of the Birmingham District such as no other railroad man in the history of the South or any other section of the United States has given.

He saw from the first that if a railroad was to be made a factor in the development of a State, increased traffic must not be its sole idea; but it must achieve power, influence, and success itself; it must not only live and let live, but it must create, originate, construct, develop, coöperate, and achieve. It must make low rates to induce consumption and to increase production.

"M. H. Smith is the biggest, broadest man you ever saw in your life!" DeBardeleben has said. One and all, to a man, the coal and iron men of Alabama stand up for the chief, "our greatest man," says George B. McCormack to-day. Were one to present, item for item, an accounting of his work in the making of the mineral region, it would take a volume. Commencing with the summer of 1884, large investments were made in Alabama by the Louisville and Nashville Railroad Company, all of which were appropriated by and obtained through the board of directors, who acted on Milton H. Smith's recommendation. The sum spent from this date to 1908, including construction, acquisition, and equipment of railroads by this company, amounts to more than thirty million of dollars.

Colonel Shook relates an incident of the panic times of 1893, when M. H. Smith called all the coal and iron men together: "Keep in blast," Smith cried to them. "It don't make a deuced bit of difference what the freight rate is, — keep in blast! I 'll carry the product to market if I 've got to haul it on my back!"

This one instance shows the sort he is. It may be said now for all time, Milton H. Smith is the man who emancipated the long shackled industry of our State and opened for it the vista into which it is now marching, led on by the captains of the present day forces.

To him belongs the credit, not merely of his own achievement in making the Louisville and Nashville system the greatest railroad in the South a durable and a splendid public work, but also, as it has been pointed out, the sound, concrete development of the country and the achievements of his contemporaries are due in large part to him. This man has been the strongest force in

the industrial history of Alabama. He is the great progenitor. "There is no part of that vast railroad system or the country it traverses that has not been strengthened by his hand," observed William L. Doan of Birmingham. "There is no man in his employ, from brakeman to vice-president, who has not felt the power of his personality, — that splendid, energetic, honest influence! Like Abraham — he will live in his children."

CHAPTER XIX

A CHAPTER OF PROGRESS 1880–1886

Colonel DeBardeleben starts diversified industries in Birmingham. Establishment of rolling mills now owned by Republic Iron and Steel Company. First blast furnace of city of Birmingham now owned by Tennessee Company. Biographical sketch of Kentucky iron-master, T. T. Hillman. Formation of Alice Furnace Company. Colonel Sloss resigns from management of Oxmoor. "Man, why don't you build you a furnace of your own?" says DeBardeleben. Organization of Sloss Furnace Company, parent stock of Sloss-Sheffield Company. Introduction of Harry Hargreaves. First Whitwell hot-blast stove in Alabama installed in old Sloss furnaces. First million dollar deal of Alabama coal and iron trade. Colonel Enoch Ensley comes to town. "Give me something in the way of a coal mine that can knock the Tennessee Company into a cocked hat!" says he. DeBardeleben gives him Pratt. The Memphis clan takes hold. Sketch of Colonel Ensley's life. Pratt Coal and Iron Company organized. Introduction of Llewellyn Johns, Jones G. Moore, Fred M. Jackson, and John B. McClary. Record made in pig iron. Death of Major Peters. Formation of Cahaba Coal Mining Company. Further achievements of T. H. Aldrich. Building up a coal mining world. Association of Colonel Cornelius Cadle with Cahaba Company. Opening up Blocton and Dudley. Export Coal Company and Excelsior Coal Mine Company formed by Aldrich. First coal exported from State to West Indies in 1889–90. Founding of Williamson Iron Company. Sketch of C. P. Williamson. Woodward Iron Company's furnace goes into blast. Introduction of J. H. McCune. Competent and successful organization built up by Woodward brothers. Robert P. Porter's comments on Birmingham District in 1883. Entrance of William T. Underwood. Movements of Colonel DeBardeleben. Organization of Mary Pratt Furnace Company. Wider market created for Birmingham Iron. Birmingham Mineral Railroad begun. Development work inaugurated by Mr. Underwood.

FOLLOWING the successful opening of the Pratt mines there were started in the Birmingham District, during the ensuing four years, eight new concerns: The Birmingham rolling mills, Alice Furnace Company, Sloss Furnace Company, Pratt Coal and Iron Company, Cahaba Coal Mining Company, Williamson Furnace Company, Woodward Iron Company, and Mary Pratt Furnace Company. Foremost among these were the Pratt Coal and Iron Company, the Cahaba Mining Company, and the Woodward Iron Company.

The first group to be regarded in these chronicles comprises the rolling mills, the Alice and Sloss furnace companies, and

the Pratt Coal and Iron Company, and introduces the names of Thomas Ward, W. B. Caldwell, T. T. Hillman, Harry Hargreaves, Enoch Ensley, Llewellyn Johns, Jones G. Moore, Fred M. Jackson, John B. McClary, and Arthur W. Smith. The second group includes accounts of the Cahaba Coal Mining Company, founded by T. H. Aldrich; the Woodward, Williamson, and Mary Pratt iron making companies, and further introduces the names of Cornelius Cadle, Lewis Minor, J. H. McCune, C. P. Williamson, and William T. Underwood. In the first group, it was DeBardeleben who was back of the launching of the rolling mills and the Alice furnace. Perceiving that he must have a consumer for his Pratt coal, he urged Messrs. Dupont and Caldwell and T. T. Hillman of Louisville, Kentucky, to run down to the now growing city of Birmingham, and take a look at the Pratt mines. He offered them special inducements to locate in Birmingham: for instance, Pratt coal, f. o. b. at $1.15 per ton for ten years; free carloads to start on for testing purposes on their home ground, and in addition to the low price on coal, concessions in the way of mill and furnace sites.

Finding Pratt coal stood the test, DuPont and Caldwell took up DeBardeleben's offer, and began construction work in 1879 on the Birmingham rolling mills. In July of the following year the plant went into operation, with W. B. Caldwell, Jr., as president, and Thomas C. Ward as general manager. Also associated with the enterprise were Dr. Lawrence Smith and Thomas Coleman. The idea of the management was first to build a merchant mill for the manufacture of bar, sheet, plate, and guide mill irons, to be followed later, if practicable, by steel works. It was not until 1897 that this plant manufactured any open hearth steel. Plates were then rolled here to equip a United States gunboat during the Spanish War. The mills are owned at the present date by the Republic Iron and Steel Company.

At the same time (1879–80) the Alice furnace was in process of construction. When DeBardeleben had secured gratis from the Elyton Land Company the section of ground between the lines of the Alabama and Chattanooga and the South and North railroads, and within stone's throw of the terminus of the Pratt Mines Railroad, Mr. Hillman accepted his offer, and the two men went into partnership with $80,000 capital to start on. They employed John Veitch and C. E. Slade, and construction work

was begun on the first furnace of the city of Birmingham — the one destined, as it turned out, to become in a few years, at the hands of George B. McCormack, a celebrated landmark in the story of steel as well as the story of iron. The work was begun September 29, 1879, and the furnace went into blast November 30, 1880. The plant was named for Colonel DeBardeleben's oldest daughter, Alice.

The Williamson furnace later reinforced the rolling mills and the Alice, and these, together with the Linn Iron Works, were all concentrated in the one locality and gave the town a busy look, at its very gates. The industrial population was increased by several hundred; the district's payroll grew, and, the point in question to Aldrich and DeBardeleben, there were now steady consumers of Pratt coal. Other enterprises of this period were the Birmingham Machine and Foundry Company, founded in 1881 by Richard W. Boland, and the St. Clair Mining and Mineral Company, formed in 1881, by George C. Kelley.

The output at Alice furnace at the start was fifty-three tons per day of mill and foundry iron, of the brand Alice. And this was a record breaker for Alabama. To-day, the new Alice, in the hands of the Tennessee Company, turns out per day nearly three hundred tons of pig iron. Vice-president Crockard is so proud of the furnace's record that he is constantly bringing up the latest figures. "Hear about Alice," he will say, "she made two hundred and ninety-two tons yesterday — pretty good, little fellow!" At the time Alice went into blast, a battery of one hundred and fifty coke ovens were installed. Under the expert and economical handling of the Kentucky iron-master, the plant soon got into good going, and, like the Pratt mines, it was a commercial success from the very start.

T. T. Hillman was, as Colonel Shook has observed, "born and bred in a blast furnace." He was the son of Daniel Hillman, Jr., who, with Major Peters and Colonel Sam Tate, had once ridden horseback over the Birmingham district in the years just after the Civil War, as has been related, and invested then in Alabama coal and iron properties. Of his grandfather, the builder of Tannehill forge, in 1830, T. T. Hillman had no personal recollection, as he himself was born in Kentucky, in 1844, just twelve years after that pioneer furnaceman of Alabama had died. When T. T. Hillman was barely two months old, his mother carried him from the old Marable homestead out to Fulton

furnace in the woods of Lyon County, Kentucky, and here the boy spent his childhood and learned the *a b c's* of the blast furnace.

When scarcely seven years old, however, the little boy was thrown from his pony, dragged, and very nearly killed. For six years he lay an invalid, with his spine permanently injured. Thus he was crippled and handicapped for life at the outset. His father and his mother devised many ways to instruct and interest the unhappy little boy. His keenest pleasure, when he was older and stronger, was hunting and fishing. Among the Hillman household slaves were two big, kindly, black men, who were detailed regularly to carry little "Tenny" Hillman out into the woods, on long hunting and fishing expeditions. These men took faithful care of their young master and, when, perched atop their broad shoulders, he brought down his game, they were as proud as though they, themselves, had done the shooting.

"All during Mr. Hillman's youth he hunted, in this way, carried on the back of one or the other of these negro men," said Colonel Shook, "and, by the way, he held the record in fishing, — he captured the biggest tarpon ever caught in the South." When young Hillman was about sixteen years old, he entered Bendusia Academy, just outside Nashville, and thus supplemented his home studies with a two-years' academic course. Returning to Trigg County, his father gave him a position in the office of the Empire Furnace Company.

The Hillman brothers were then manufacturing bar iron and plate sheet iron, and supplying fully four fifths of all the iron sold south of the Ohio. The Cumberland iron turned out by Daniel Hillman and his brothers was, according to Colonel Shook, "a charcoal iron, low in sulphur and in phosphorus — a magnificent grade — identical really with basic iron. The Hillman boiler plate and the 'Tennessee bar iron,' were a pretty well-known quality, you know."

During the Civil War young Hillman had charge of both the Center and Empire furnaces. There were occasions when these plants were targets for both Federal and Confederate forces, the firing line being first on one side of the furnace group, then on the other. Center kept in blast very nearly throughout the war period, and in 1866, Daniel Hillman gave his boy, as a present, on his twenty-first birthday, a fifty-thousand-dollar interest in

the company, and made him general manager. The firm name was then changed to "D. Hillman and Son." For the next ten years Hillman worked steadily at the furnaces, in the face of the adverse conditions then confronting the iron trade. At length he found it to his advantage to sell out, and this he did, shortly after his father's death. Early in 1879 he embarked in the mercantile business in Nashville, Tennessee, purchasing a stock of iron and hardware from his cousins, then in trade at that point. All over Kentucky and Tennessee there were Hillmans in the coal and iron and allied trades. But T. T. Hillman could not stand being away from a blast furnace. Just about six weeks after he had taken up the Nashville proposition, he went to the city of Birmingham, at DeBardeleben's invitation, decided to build Alice furnace, wound up his affairs in Tennessee and Kentucky, and came to Birmingham to stay.

Shortly after Alice went into blast, Hillman formed the Alice Furnace Company, by combining the Hillman Coal and Iron Company (consisting of properties gathered together by his father and Major Peters), the Birmingham Coal and Iron Company, and the Alice Furnace Company, the last name being retained for all. Capital stock was increased to $250,000, and the consolidated company was officered by T. T. Hillman, president and general manager; H. F. DeBardeleben, vice-president, and F. L. Wadsworth, secretary and treasurer. Serving on the board of directors, in addition to the company officers, were Sam Tate, Major Tom Peters, and Charles Hillman. Improvements were made gradually. The first stack, "Little Alice," was eventually relined and enlarged to 75x15, and three Gordon-Whitwell-Cowper stoves were added. A new stack, "Big Alice," 75x18, with three Whitwell stoves, was put in blast in 1883. The fuel continued to be Pratt coke, and the total annual output of both furnaces steadily increased.

By the spring of 1881 the new town of Birmingham was finding its sea-legs. Neither Oxmoor nor Alice furnaces could meet the demand for pig iron in this year. The Louisville and Cincinnati factions in control of Oxmoor had come to the point where they locked horns over the Eureka Company, and James Withers Sloss was getting irked. Not one dollar's dividend had been paid by this company.[1]

"Why don't you build you a couple of furnaces of your own,

[1] Robert P. Porter.

man?" DeBardeleben said to the Irish colonel. "I'll let you have my Pratt coal at cost, plus ten per cent for five years."

"Put that down in writing," exclaimed Colonel Sloss, jumping to his feet. The contract, to be held binding only in case of the success of the projected company, was drawn up on the spot, signed and sealed. An agreement to secure the requisite ore on practically the same terms was obtained at DeBardeleben's instance, from Mark W. Potter, who, at that time, owned the half of Red Mountain. With both contracts in pocket, therefore, Colonel Sloss took train for Louisville. Exhibiting them to President Standiford, he got the Louisville and Nashville backing on the venture and B. F. Guthrie's capital for a booster. He then cut traces from the Eureka Company and formed his first individual iron making concern in the Birmingham District in 1881, under the name of the Sloss Furnace Company. The list of officers included James W. Sloss, president; B. F. Guthrie, vice-president; and Colonel Sloss's sons, Fred Sloss, secretary and treasurer, and Maclin Sloss, general manager. These four men, basing operations on the Potter and DeBardeleben contracts, and with support of the Louisville and Nashville, otherwise M. H. Smith, laid one of the foundation stones for the big Sloss-Sheffield Steel and Iron Company of the present time.

A fifty-acre tract of ground, located on the northeastern bounds of the city, and sandwiched in between the tracks of the Alabama Great Southern and Louisville and Nashville, was purchased, and construction work on the first of the two seventy-ton furnaces, now called The Sloss City furnaces, was begun. The colonel sent up to South Pittsburg for Harry Hargreaves, who, with John Dowling, Walter Crafts, the Noble brothers, J. H. McCune, James Shannon, Stephen Stucky, and John Veitch, made up the little company of expert furnacemen in Alabama and Georgia in the early days.

Hargreaves was an agile little fellow and a tireless workman. He used to "shin up" all those pipes, stoves, and stacks like a Jackie aloft the rigging of a man-o'-war. It was he, by the way, who, as agent for Thomas Whitwell, introduced the Whitwell hot blast stoves in the United States. It was at No. 1 Sloss furnace that they were first installed in the Birmingham District.

Hargreaves was a Swiss boy. His father's entry into the cotton business, in Liverpool, brought him to England, where he began the civil and mechanical engineering course at Harrow.

Before he finished his father died and the boy became bread winner for the family. His first work was as draughtsman in the office of Colston & Jones, an engineering firm of Liverpool. From here he entered the service of Thomas Whitwell. In 1871 he was booming up trade for the Whitwell stove in the United States with headquarters at Philadelphia. He installed his first stove in the United States, in a plant at Cedar Point, New York, for Thomas Wetherbee. Following in the wake of James Shannon, young Hargreaves came down to Rising Fawn, Georgia, and put up four of the big stoves there for J. C. Warner and Governor Joe Brown. The following year, 1876, he represented the Whitwell Company in the metallurgical department of the centennial exposition at Philadelphia. The gold medal was awarded his "goods," and that incident fixed the destiny of the Whitwell hot blast stove in the United States for good and all. Hargreaves located at South Pittsburg, Tennessee, just after the exposition and began his career as a furnace builder there under James Bowron, Sr. Here he erected two one-hundred-ton blast furnaces, owned to-day by the Tennessee Company.

Colonel Sloss, having been long associated in mercantile affairs, handled his new furnace company with an enterprising hand. His acquaintance throughout the length and breadth of the State stood the company in good stead, and helped sell his pig iron. A second stack followed No. 1 in 1882. The coal and ore holdings of the company were increased, and two limestone quarries and sand deposits were acquired. Always conservative, the colonel did not risk branching out, but stayed right with his business until he got a fortune out of it, some three or four years later.

Close on the heels of these three initial iron making enterprises, the Birmingham rolling mills, the Alice furnace, and the Sloss City furnaces, there came an incident of considerable interest — the first million dollar deal of the Alabama coal and iron trade. It happened in this way: There came to Birmingham, to the Relay House — and to the welcoming arms of Major Tom Peters — a tall Tennessee brother, Colonel Enoch Ensley. He was looking for something in the way of a coal mine, he said, that would knock what the Tennessee Coal, Iron, and Railroad Company had up around the Cumberland Mountains into, he said, "a cocked hat."

Major Peters did not think there would be any trouble about doing that in the Birmingham District. He would introduce him to Colonel DeBardeleben, and Colonel DeBardeleben could show him the Pratt mines, for instance.

"I was living then in a little two-roomed cabin," says DeBardeleben, "one room of which was my office. Peters brought Ensley there."

It was just about the time Colonel DeBardeleben was beginning to sight what he took for the spectre of tuberculosis ahead of him, and he had about made up his mind to pull up stakes and go West. The Pratt mines were then turning out two thousand tons of coal per day under Arthur W. Smith's management, for Aldrich was now engaged in a bigger coal business than ever Pratt reached. DeBardeleben showed the figures to Enoch Ensley and showed him his good Pratt coal. The Tennessee colonel did not know Pratt coal from Newcastle. But he had never been able to choke off Tom Peters on Alabama coal of any description; so he took Peters' word and DeBardeleben's that Pratt was the star quality, and closed a million dollar deal on the dot, the first on record in the coal and iron business of Alabama, and of the whole South. At that date it created a bigger sensation than did the "$50,000,000 deal" of the United States Corporation in 1907. The first payment, a check for $600,000, was brought to the old Berney Bank. W. P. G. Harding (now president of the First National Bank of Birmingham) was then being "broken in" as assistant cashier of the Berney Bank. "That check of Colonel Ensley's was about the biggest check I had ever seen," he says; "it was exactly six times the capital stock of the bank!"

Back of Ensley, of course, was his Memphis crowd: Napoleon Hill, J. C. Nealy, W. N. Milburn, and William Fontaine, every mother's son of whom, in addition to Colonel Ensley, was then at feud with every mother's son of the Tennessee Coal, Iron, and Railroad Company, up in Tennessee, and deeply desirous, as was natural in Tennessee, to exterminate all rivals from the face of the globe.

Colonel Ensley, as may be surmised, was more or less of a sport, and one of the few moneyed men of Tennessee. He had a fair-sized patrimony to lead off with, for his father, a large planter, had left him a million. Born near Nashville, Tennessee, in 1832, Enoch Ensley, like Judge Baxter's boys, and William T. Underwood, was bred to the law. But he liked swapping horses better,

and after once getting clear of the Lebanon Law School, he dealt with stables and stock farms, and had what he termed a good time. After his first marriage he built a home on the outskirts of Memphis, which was called a "palace in the woods." They say he treated his little folk, his boy, and his two girls (Hattie and Lady Ensley, for whom the two Sloss-Sheffield furnaces he eventually built at Sheffield, are named), like "a prince's children." The colonel owned plantations and stock farms all around, and headed a big Memphis real estate concern, and the Memphis Gas Company. He liked to see things move along quickly and get results "the next minute." He could see far ahead and make great plans, but, as Fred M. Jackson says, "like DeBardeleben, he had very little patience with detail."

So elated was he at making such a good trade as Pratt mines, that he promptly acquired majority control of the Alice Furnace Company, and also purchased the Linn Iron Works adjoining the Alice property. He consolidated the two with the Pratt Coal and Coke Company, and thus formed the Pratt Coal and Iron Company, with himself as president; Thomas D. Ratcliffe, secretary and treasurer, and W. L. Gude, superintendent of railroad construction. At Major Peters' instance additional coal lands were purchased, which, added to those acquired by Aldrich, Sloss, and DeBardeleben, make up the great coal holdings around Pratt, which are now owned by the Tennessee Company.

"At that time lands that did not carry the Pratt seam were regarded, so Colonel Shook says, as practically valueless, and they were therefore acquired by Colonel Ensley at from $2 to $4 per acre. He got all the lands he wanted at this price, except the two forty-acre tracts upon which Pratt City is now located. The owner of these lands declined to take less than $5 per acre, and that price Colonel Ensley refused to pay. Shortly afterwards, however, realizing the necessity of owning all the ground around Pratt mines, the colonel decided to pay this 'enormous' price. To his surprise, when he made the offer, it was declined, the owner saying he would not take less than $10 per acre. This Colonel Ensley refused outright to pay, but about twelve months later he went back and offered $10 per acre for the land. This time the owner said he wanted $25 an acre, and at this point negotiations were broken off. The land was eventually sold out in lots, and is now the heart and center of Pratt City."

Colonel Ensley then planted himself right down in Alabama, resolved "to do up the Tennessee Company or bust." He

ordered four more slopes sunk at Pratt, one of which he named the Laura Ensley, after his wife. His chief mining engineer was a Welshman named Llewellyn Johns, who had been in charge of the engineering work at Pratt, under DeBardeleben, for a short while. Johns was born, as he says, "atop of a coal mine," in 1844, at Ponty Prodd, Glamorganshire, Wales, the home county of Giles Edwards. After an interim at an English military academy, he returned to Wales, to work in the coal mines. Like Billy Goold, he saw no future for a miner in Great Britain, and left Wales for the United States. The young man wandered over the middle Atlantic States, working his way along, and finally struck for the West. His adventures in Nebraska, Nevada, and Montana are a book in themselves. Returning to Pennsylvania, he worked in the Diamond mines near Scranton, and in other localities for various members of the Thomas family, through whom he was induced to "try his luck in Birmingham." He arrived in the Birmingham camp on a spring morning, in 1872, without one cent in his pocket. He approached a man who was busy laying out claims and asked for a job — "something to earn breakfast money." As it turned out, the man was Captain Frank P. O'Brien, a son of Llewellyn Johns' former boss, at the Diamond mines, in Scranton. The warm-hearted young Irish "captain" was so delighted to learn this, that he at once went shares on breakfast, bunk and board with the young Welsh miner. Johns then worked in and around Birmingham as a carpenter and miner, and at the Warrior coal mines, under Pierce. He then went to Rising Faun, Georgia, but returned in 1877, to Birmingham, when through James Thomas, he secured the position of superintendent of Helena coal mines, near Oxmoor, after which he went to Pratt. He was eventually identified as mining engineer with the Tennessee Company, the DeBardeleben Coal and Iron Company, and the Republic Iron and Steel Company. The coal mine "Johns," and the blast furnace, "King John," both now owned by the Tennessee Company, were named for him. The colonel, now retired from business, preserves, to this day, innumerable mementoes of this wandering past and has in glass cases, at his Birmingham home, "The Elms," the scouting and Indian suits once worn by him, as also the uniform of his school days. Gifted with a certain native-born eloquence, an enthusiasm distinctly foreign to the average American business man, and an energy unquenchable, Llewellyn Johns

1. Old Helena Coal Mines, Slope No. 2, 1878
2. Lump of Coal sent to New Orleans Exposition by Pratt Coal and Iron Company
   Figures from left to right: Col. Enoch Ensley, L. W. Johns, Joshua Collins, William Gude
3. Progress of the Exposition Party

has ever been a marked character of the Alabama mineral regions, — possibly its most unique feature.

In the old days at Pratt mines his desire to "go ahead" quite matched Colonel Ensley's. Energetic work went on at all the properties. Colonel Ensley improved the Alice furnaces, and set up race track tactics. Big Alice, for instance, was put to racing Little Alice, and both were trained to try for the run over Sloss. Big Alice, as a matter of fact, finally broke the record in pig iron output, under Colonel Ensley's management, making one day, early in 1886, one hundred and fifty tons of pig iron, the largest daily run of any single furnace of the Southern States recorded up to that time. When she passed into the hands of the enemy, the Tennessee Coal, Iron, and Railroad Company, as, indeed, that bitter consummation came in time to be, her output averaged from one hundred and twenty-five to one hundred and fifty tons per day.

The coke ovens of the Pratt company were also increased in Ensley's administration. In June of 1885, he employed Jones G. Moore to superintend this work. Moore was a young man, then but twenty-three years old. He had worked with the Newcastle Coal and Iron Company, the Coalburg Coal and Coke Company, and, for a time, with Aldrich and DeBardeleben. He was a country boy, born and raised on a farm in Macon County, Alabama, near Tuskegee. But he got fairly tired of cotton, corn, and mules, and essayed running a steam grist mill. Finding that he had a vocation for the coal business, he left the country school and his father's farm to work under John T. Milner; then he went over to Pratt mines. Step by step he mounted with the Alabama coal business, and to-day he is manager of mines of the Sloss-Sheffield Steel and Iron Company. Other young men of the Pratt company in Ensley's service, and later to be associated in the development of the Birmingham District, besides Arthur W. Smith and Jones G. Moore, were Fred M. Jackson and John B. McClary.

Mr. Jackson was the timekeeper of the Pratt Coal and Iron Company and assistant bookkeeper to Dan Smith. He was an Alabama boy, the son of Dr. R. D. Jackson, a surgeon of the Confederate army. He was born September 1, 1859, on a farm in Perry County. Following the close of the war, Dr. Jackson took his family to Selma, and in 1868 bought a plantation nine miles out of the town. Like Jones G. Moore, Fred Jackson had

short-cut terms, "in between crops," at the county school, and rounded up with a one-year term at the Summerfield high school, after which, in 1879, he started in the cotton business at Selma. Hearing so much talk of the Birmingham District, young Jackson soon changed from cotton to coal, and in 1881 entered the service of the Pratt Coal and Iron Company. He remained with the company throughout Ensley's administration, and served as cashier during the early régime of the Tennessee Company. He left the trade for a time to go into the business of mining supplies and wholesale groceries, and not until 1890, when T. T. Hillman rebuked him for leaving his profession, did he step back into the ranks, to become, as shall presently be told, founder and organizer of the Alabama Consolidated Coal and Iron Company, with T. G. Bush and others.

John McClary became assistant superintendent of the Pratt Coal and Iron Company, and was later president of the Ensley Manufacturing Company. Although he was a Tennesseean, as was Ensley, he and the colonel got on fairly well. McClary, like Jones G. Moore, had worked all around the mines, turning his hand to whatever there was to do. He was a McMinn County boy, born in 1857, and started his career in the Alabama newspaper business, but soon came to the point when he saw he must dig coal for a living. He went to the Helena mines in 1873, and after a turn with the shovel and pick, was made tally boss and timekeeper. Then he went to Oxmoor where Colonel Sloss made him outside manager. From Oxmoor he went over to Pratt, and Arthur Smith took him into the office together with young Fred Jackson. Mr. McClary married Lucy Brittan, who was the daughter of General P. H. Brittan, founder of the *Montgomery Advertiser,* and secretary of State of Alabama.

Among the firm friends made by Colonel Enoch Ensley in Birmingham were Ben Roden and John David Hanby. And both men thought the world and all of the Tennessee colonel. "He was a worker if ever there was one," Mr. Roden said, "yet he told me, that up to the time he came to Birmingham, he had never done a lick of work in his life. Yet he had one of the clearest brains I ever saw in a man, and a mental force and energy you don't often come across."

Captain Hanby says Colonel Ensley was "the freest man with his money I ever saw. Always setting 'em up! And he never let the widows and orphans see hard times. He was as generous

as the day is long!" Shortly after Colonel Ensley had consolidated his various properties, his friend, the great pioneer prospector, old Major Tom Peters, went up to the Louisville Exposition to take charge of a large exhibit of minerals and other resources of Alabama, made by the railroads. Here the major was taken suddenly ill, and died. His funeral took place in Birmingham. Every house of business in the town was closed, and a great procession followed his body to the grave. Miss Duffie writes:

"Viewed in the calm and impartial light of future history, Major Peters' character and career will stand clearly outlined as heroic, tender, and beautiful. His story even now reads more like a romance than the actual facts, and those who knew him as well as I did, and knew the intense piety and unselfishness of his nature and his numberless liberal deeds of thoughtfulness, can but believe that 'after life's fitful fever he sleeps well.'"

Following Enoch Ensley's million-dollar trade, the Cahaba Coal Mining Company was organized by Truman H. Aldrich. Combining an area of more than twelve thousand acres of coal lands in the South Cahaba coal fields, in the counties of Jefferson, Bibb, and Shelby, and having a capital of one million dollars, the organization of this — the greatest coal company of that period in the South — created another sensation. Pratt coal mines soon "played second fiddle." The board of directors of Cahaba Company comprised T. H. Aldrich, W. S. Gurnee of New York, Samuel Noble and A. L. Tyler of Anniston, Alabama, and Cornelius Cadle. Mr. Aldrich was president and treasurer; Colonel Cadle, vice-president and general manager. Peter B. Thomas (to-day part owner and manager of Montevallo Coal Company, in conjunction with T. H. Aldrich) was then employed as mine superintendent, and Lewis Minor of Connellsville, Pennsylvania, was general superintendent of coke ovens.

Ever since the early eighteen-seventies, Truman Aldrich had been buying coal lands with the surplus earnings accumulating from his Montevallo properties. When he resigned from the Pratt Coal and Coke Company, in 1881, he owned several thousand acres of coal lands along the Cahaba River, which he had prospected himself.

After first gathering together several thousand acres in Jefferson County, which he named the Henry Ellen properties, after DeBardeleben and his wife, Ellen Pratt DeBardeleben, Mr.

Aldrich closed a $400,000 deal with DeBardeleben, and then began the building of his new coal mining world in the Cahaba region.

Colonel Cadle, who was formerly associated with Mr. Aldrich at Montevallo mines, had also been engaged in purchasing sections of iron ore and coal lands in this locality, with a backing of several Iowa capitalists. Iowa is Cadle's home State. Although born in New York City, May 22, 1836, Cornelius Cadle was reared at Muscatine, Iowa. During the Civil War he served with the Eleventh Iowa Volunteer Infantry, and participated in all the battles and campaigns of the army of the Tennessee, from the battle of Shiloh to the end of the war. He was wounded at the seige of Vicksburg. After the war Colonel Cadle was connected, for a time, with the Freedman's Bureau, and in 1867 was appointed receiver of a national bank at Selma, Alabama, where he eventually took up his residence. In 1873 he became connected with the banking house of George A. Morrison and Company, with which Mr. Aldrich was originally connected. He purchased an interest in 1876 in the Montevallo coal mine and resided there for several years. In 1881 he sold out, and spent a year in Colorado in the San Juan mining district, returning to Alabama in 1882, where he joined Mr. Aldrich in the organization of the great Cahaba Company, whose properties belong to-day to the Tennessee Coal, Iron, and Railroad Company. Colonel Cadle served as vice-president and manager of this company until the consolidation in 1892. In March 1895, the colonel was appointed chairman of the Shiloh National Military Commission, and still holds this position.. He also holds a responsible position with the Ohio commandery of the "Loyal Legion" of the United States.

The first step of the Cahaba Company managers, back in 1883, was the building of their transportation line to connect with the Alabama Great Southern, the old Alabama and Chattanooga once run by the "Yankee" Stanton. A railroad was constructed from Woodstock, where Giles Edwards then had his blast furnace in operation, to a portion of their mining property named Blocton by Mr. Aldrich. The first seam at this celebrated group of mines was opened and coal shipped in the spring of 1884. Eight hundred men were employed; all told, seven mines were opened on the Woodstock and Underwood seams, and a coke oven plant constructed. Before the decade was out the output

totaled several million of tons. The company sold coke to Oxmoor and Anniston, and coal eventually to the Pioneer Company. The mines were the leading producers of the district all during the eighteen-eighties, and the company furnished coal to all excepting one of the railroads to New Orleans. The Southern Pacific Railroad alone used five hundred tons daily between New Orleans and San Antonio. The entire body of company lands, in all, 1,238,031 acres, was valuable for coal, barring some 635 acres of "surface." It was the best and largest area of good coal land ever gotten together in the State up to that time and is considered the most important achievement of Mr. Aldrich's career as a mining man. This was, in fact, the most active period of his work in the Alabama coal business. Simultaneously with his Blocton operations, which mines are now owned by the Tennessee Company, he opened the original Dudley properties in Tuskaloosa County, part of which are now owned by the Alabama Consolidated Coal and Iron Company, officered by Jos. Hoadley and Guy R. Johnson, and part by the Big Sandy Iron and Steel Company, officered by William P. Pinckard.

In 1888 Mr. Aldrich formed the Export Coal Company and Excelsior Coal Mine Company, and also opened two mines in Shelby County, near Gurnee. In this same year the Louisville and Nashville, which had extended a branch from Blue Creek to Woodstock, concluded to build a track from Helena southwest to Blocton. The East Tennessee, Virginia, and Georgia Railroad, now a part of the Southern system, decided on the same route. The railroad war eventually wound up with the result of a joint track to Gurnee, Blocton, and Bessemer. The Brierfield, Blocton, and Birmingham line, the "old B. B. and B.," now also belonging to the Southern, was completed from Gurnee Junction to Bessemer by Mr. Aldrich and J. W. Worthington. This track comprised one hundred miles in all.

The Excelsior Company properties were eventually consolidated by Mr. Aldrich with those of his Cahaba Company. His Export Coal Company was the first company to introduce Alabama coal to ports in the West Indies, Mexico, South America, and Central America. W. D. Munson of New York, a land holder in Cuba and a large ship-owner (operating a steamship line between New York and Rio Janeiro), was president; T. H. Aldrich, vice-president, M. P. Canfield, secretary and treasurer. The project was promoted by Mr. Aldrich and several of the stockholders of

the Cahaba Company at considerable expense. "The natural outlet of the Cahaba Company was to the South," Mr. Aldrich has observed. "Coal was then being mined all the way to the north of us, but none to the south. The export business grew out of the necessities for new markets." No Alabama coal was exported at this time except from the mines of the Cahaba Company.

President M. H. Smith secured an appropriation of one hundred thousand dollars from the Louisville and Nashville, to erect a wharf for the Export Company at Pensacola. The company owned and operated two ocean-going tugs, six barges, two schooners, and two steamships. In 1890 they sent out fifty thousand tons of Blocton coal and brought back tropical products. "It was a reciprocal business straight along," says Mr. Aldrich. In 1891 he took as his guests a large party of representative coal and iron men to Pensacola to view the naval drill, and "incidentally" to examine the subject of the export trade from that point in its relation to Birmingham and the mineral region. One of the members of this party was General Rufus N. Rhodes, editor of the *Birmingham News*, and he exploited the export business for Alabama coal far and wide.

"The work of development went on, and as the country grew so did the city of Birmingham," wrote John T. Milner in 1889. "The Louisville and Nashville Railroad did not stop. She extended her branches and our markets in every direction. She went to New Orleans. She went to Pensacola. She began trading with the West Indies. She has placed her branches all over our country; other railroads cut but little figure. The Louisville and Nashville is now not only Birmingham, but Alabama. Without the aid of the Louisville and Nashville the South and North would never have become the factor it is in the State's development, and progress would have been staved off a century. . . . As day after day the leaves from the sealed book of Nature are turned over by DeBardeleben and Hillman, Ensley and Aldrich, it can be seen in letters imprinted on the sky all over the world that the Birmingham District has no parallel on earth."

The Williamson Iron Company was organized by C. P. Williamson in July, 1885. Mr. Williamson, who was the proprietor and operator of the Jefferson foundry, was one of the few experienced iron workers then in the district. His original concern began in the spring of 1879 as a small shop, and carrying in the early eighties one hundred and fifty men on its pay roll, was merged by its founder into

his furnace company. C. P. Williamson, born at New Richmond, Ohio, 1843, was the son of a river engineer. He entered the shops of the New Albany and Chicago Railroad in 1858 and got his first training as a mechanic. At the outbreak of the Civil War he entered the Union forces, serving with the army of the Potomac and reaching rank of lieutenant. He carried on his trade as an iron worker in various quarters after the war's close. He became superintendent of a firm of architectural iron workers located at Louisville. This firm chanced to get old Captain Linn's order to do the iron work on "Linn's Folly." In this way Mr. Williamson early became identified with this district. He accepted the management of the Linn Iron Works in 1875, and branched out later into independent organizations.

Among other men connected at this decade with coal and iron interests in various minor ways, or trade closely allied to coal and iron, are recorded the names of Charles W. Wood, Isaac Price, Elbridge Gerry Stevens, Samuel H. Lighton, James C. Long, Patrick Byrne, G. H. Harris, P. L. Rogers, and Arthur Owen Wilson.

The Woodward Iron Company's first furnace went into blast August 17, 1883. The company had been organized in the fall of 1881 with W. H. Woodward as president, and J. H. Woodward as secretary and treasurer. J. N. Vance, president of the Riverside Iron Works at Wheeling, West Virginia, was associated with the Woodward brothers on the board of directors. The furnace site, some twelve miles southwest of Birmingham, together with contiguous coal and ore lands, was purchased at the time the Thomas family of Pennsylvania first invested in this district, which was shortly after the Civil War. In the early days of Jefferson County the first little log-cabin school of Jones Valley was located on this property, which was acquired by the Jordan family in the eighteen-thirties.

The Woodward brothers bought several hundred acres from Fleming Jordan and took up their quarters in the comfortable, one-story old farmhouse that, with big eaves and vine-covered porches, drowsed under the shadow of the oak grove there. There were gardens all about it— kitchen garden and flower garden — as well as a winter house for flowers. And it was in Mrs. Jordan's rose garden, just one hundred yards away from the porches of the rambling old house, that Woodward Furnace No. 1 was built.

The Woodwards brought down from West Virginia one of their own men, John H. McCune, to superintend the construction of their furnaces. Mr. McCune was then acting manager of the Riverside Furnace and the Wheeling Iron and Nail Works of Wheeling, West Virginia. He is a Grand Army veteran. His experiences from the time he quit his father's farm in Pennsylvania to go to the wars were various. He enlisted in the Ninth Pennsylvania Reserves, the regiment that went through first and second Fredericksburg, and second Manasses. Here young McCune was captured, but, escaping, he rejoined his regiment in time to fight at Gettysburg. After the battles he went up to the coal works of Allegheny and the Eliza furnaces of Pittsburg, and started out as a carpenter. He began to take contracts, and superintended the building of various iron works throughout Pennsylvania, Ohio, and West Virginia. After completing the first Woodward furnace in the Birmingham District, he superintended the Sloss furnaces, and for a time managed the Henry Ellen Coal Mines. Then he returned to the Woodward Company to erect their second furnace. He became eventually superintendent of this company.

Later, Mr. McCune organized the McCune Iron Company, which makes a specialty of blast furnace construction. It is capitalized at $75,000. Mr. McCune is president, W. H. Woodward, vice-president, and Charles C. Glidden, secretary and treasurer.

The Woodward Iron Company made good from the outset. According to DeBardeleben, they built up a wonderful organization, and outclassed all competitors by their original methods. Colonel Shook says: "The property of the Woodward Iron Company is the best of its size in the world and the best controlled. It is the only company in Alabama that mines its own coal, ore, and limestone, and hauls all its products on its own railroad without having to pay one cent freight." Its raw materials are in such close proximity to its furnaces that the company has been enabled to operate its plant with more commercial economy than has any other concern in the State. Their pig iron is made at a lower actual cost than by any producer anywhere else in the world. From the beginning this company pursued a non-speculative policy. It went in for legitimate development work on a slow, steady scale, and played what they call "the lone hand." Their business, simply that of making pig iron, has been the one

object before them from 1883, when No. 1 went into blast, until now. In 1886 the capital stock of this company was increased from $450,000 to $1,000,000. J. H. Woodward became president, and F. H. Armstrong, secretary and treasurer. To-day, in the twenty-sixth year of its existence, the Woodward Iron Company has a capitalization of $3,000,000. Two thousand men are on its pay roll, and the town of Woodward is a growing community. Everything — furnaces, coal and ore mines, and limestone quarries — are within a radius of a few miles. Their coal mines and coke-oven plants are a mile north of the furnaces, and their ore mines two miles south.

In the early part of 1883 Robert P. Porter[1] visited Alabama in his inspection tour of the iron-making districts of the South. Every fact in his report is of significant interest and value in the light of present day operations. Certain extracts from his *New York Press* story, dated from Birmingham, are as follows:

"Perhaps there is no better illustration of the variation in the estimated cost of making pig iron with coke than in the iron district, the center of which I am writing from. Of the advantages here Mr. Abram S. Hewitt says: 'This region of Alabama is unquestionably the most interesting in the United States with reference to the interests of iron manufacture in this country. It is, in fact, the only place on the American continent where it is possible to make iron in competition with the cheap iron of England. The cheapest place until now on the globe for manufacturing iron is the Cleveland region, Yorkshire, England. The distance from the coal to the ore averages them a distance of twenty miles, while in Alabama the coal and the ore are in many places within half a mile of each other.' Again the same authority says: 'I think this will be a region of coke-made iron on a grander scale than has ever been witnessed on the habitable globe.'

"Mr. Lothian Bell, an eminent English authority, after completing his tour of inspection of the Birmingham district, said: 'I will not say that Birmingham will furnish the world with iron, but I will say that she will eventually dictate to the world what the price of iron shall be.' . . . These are both Free-trade authorities, but no one who has seen this region disputes its advantages, though Mr. Bell's statement as to dictating the cost of

[1] Robert Percival Porter, editor of *Engineering Supplement* to *London Times*, London, England. Mr. Porter was director of the 11th United States Census; special fiscal, and tariff commissioner of President McKinley to Cuba [1898]; founder of the *New York Press* and *Chicago Inter-Ocean;* and one of the most widely known writers on economic subjects in the world. His article on "The New South," quoted herein, is not generally available and has been loaned for this work by James Bowron of Birmingham.

iron may be seriously questioned. Yet when the history of iron manufacturing is examined, not only in this, but in all the Southern iron districts, we are confronted with a list of dismal failures, and cheap iron seems a myth. In the course of this investigation I have visited what may be termed the six principal coke-made iron producing districts of the South, which may be classified as follows:

"1. The Chesapeake and Ohio districts, including the Victoria, Longdale, Lowmoor, and Callie furnaces.

"2. The Roanoke, or Southwest Virginia District, including Milnes, Roanoke, and the future New River and Cripple Creek District.

"3. The Cranberry ore mines, which bid fair to become important.

"4. The Tennessee River districts, including the Rockwood, Chattanooga, South Pittsburg, and Cowan furnaces.

"6. The Birmingham District, including seven large coke furnaces in this immediate neighborhood, which, with slight variations, are dependent upon the same natural conditions. In the course of the inquiry we have to face, beside the discrepancy in the estimated cost of making iron, the anomaly of millions of dollars of new capital and fresh vigor constantly being put into iron making, within sight, as it were, of colossal failures.

"We have also to face, on the one hand, statements that iron can be made at a cost not higher than the cost of production in the Cleveland (England) district or of Scottish pig iron, and on the other hand that the Tecumseh, Alabama, furnace could barely compete with Scottish pig as far inland as Rome, Georgia, with a duty of seven dollars in favor of the Alabama furnace, to say nothing of freight.

"Williard Warner, an experienced charcoal iron manufacturer of Alabama and former United States senator, admitted not long since before Senator Blair's Labor and Education Committee, when in session at Birmingham, that there had been since the war more capital sunk in Alabama than there had been dividends paid in the iron industry. Samuel Noble, of Anniston, Alabama, in a recently published statement, pointed out, in rather vivid language, the history of the iron furnaces in Alabama, Georgia, and Tennessee for the past twelve years. He claimed that the men who have started out to make cheap iron have generally either failed or sold out at a loss. 'The fact is,' he says, 'you can go into the history of iron making in Alabama for the past twelve years and find it strewn with the wrecks of shattered hopes of the men who built and leased the furnaces.' Turning to Georgia, Mr. Noble says: 'In Georgia the record is the same. If there is a single furnace in the State that for the past twelve years has not sunk the original owners all the money they put in and not changed hands, we do not know it.' And of Tennessee he writes as follows: 'Those of Tennessee have not fared much,

if any, better, even when backed by millions of English capital and skilled management from that country.' In conclusion Mr. Noble says: 'It has been a weary struggle to make these enterprises pay; it has been dragging an elephant at both legs all these years. The great trouble is, we have not home market beyond the demand created by the iron furnaces themselves. The whole state of Alabama cannot take the product of a single blast furnace for a month. We depend entirely on the North and great West to keep our furnaces going.' . . .

"The men who have gone into the iron business with any hope of making iron cheaper than England, and making nothing else, have lost their money. . . . The $55,000,000 of capital which has gone into Southern industry during the first four months of this year (1883) has been invested in cotton and woolen mills, flour mills, saw mills, furniture factories, agricultural implement works, oil mills, and a variety of other industries that will tend to create a home market for the products of the heavy mining and pig-iron industries.

"It has cost a good deal, as Mr. Noble shows, but the experience of the 'cheap iron' men teaches two valuable tariff lessons. It points out the value of a home market, and the folly of a community's attempting to become rich, prosperous, and contented without diversified industries. The result in the South has been to create a more sound, protective sentiment, a sentiment strong enough to rise above sugar, rice, iron ore, and the coarser grades of cotton goods, and to be essentially protective. With this object in view, and with a firm determination on the part of the investor to sustain the American protective system, regardless of party ties, I can understand why capital continues to pour into the Southern States, and even into districts already containing painful monuments to lost fortunes and shattered hopes. That iron can be made cheaper in the South than in any Northern State is undoubtedly true. To imagine, however, that the six Southern iron-producing districts can make pig iron, and nothing else, paying the same price for a less effective labor, and from three dollars to five dollars per ton to carry their product to market, and grow rich out of this one industry, requires a greater amount of faith in Southern possibilities than I possess.

"From information obtained in the six districts enumerated above, I should think that the cheapest iron could be made at Oxmoor, a few miles south of this place. I was positively told here that the ore only cost sixty cents a ton, the coke $2.30 a ton, and the limestone for a ton of iron twenty cents. Here is the cost of the stock:

2¼ tons iron ore	$1.40
Limestone	.20
Coke	3.45
Total cost stock	$5.05

"Add to this twenty cents for boiler fuel, thirty cents for sand and water supplies, repairs, taxes, and interest on working capital, $1.20, and labor and salaries, $2.25 to $3.95, according to an estimate made by Mr. J. W. Sloss, and we have the cost of iron, exclusive of interest on original plant, exactly nine dollars a ton at Oxmoor.

"These are the outward visible signs. The cost of the principal stock used was obtained on the spot yesterday, and the $3.95 taken from the Sloss estimate. But they do not make iron at Oxmoor at this figure. Why they do not I am unable to say. Here is the estimated cost of a ton of pig iron by Mr. Sloss, of Birmingham, based upon a run of twelve months at his two furnaces in this city:

2¼ tons ore, at $1.60	$3.60
1.4 tons coke, at $2.99	4.06
½ ton limerock, at 90 cents	.30
Fuel for boiler	.20
Sand, water, supplies	.30
Repairs, taxes and interest on working capital	1.19
Labor and salaries	2.25
Total	$11.90

"Estimate of labor on foregoing:

Ore	$2.25
Coke	2.13
Limestone	.17
Fuel	.14
Repairs and materials	.77
Labor and salaries	2.25
	$7.71
Total freights on stock to ton of ore $1.50, two thirds of which, we think, would be labor	1.00
	$8.71

"Mr. Sloss told me that in this estimate he has only charged interest on the working capital and not on the investment, and, as the working capital is only $100,000 and the investment $700,000, something should be added for this. The average cost for making a ton of pig iron at the Sloss furnace for the coming year, owing to accidents, Mr. Sloss says, will be nearer thirteen dollars a ton.

"Turning from the Sloss furnace to the Alice furnace, in this city, I found that ore eighteen feet thick was being mined outside for this furnace at thirty cents a ton; on the inside they pay from fifty cents to one dollar. Put it all at one dollar, and we have:

2¼ tons ore	$2.25
Limestone	.50
Coke	2.50
Labor, incidentals and interest, as per Sloss's estimate	3.95
Total	$9.20

"But it costs a good deal here to handle cinders, and, with the interest on bonds, etc., the cost will reach at the least ten dollars and one half per ton. Mr. Hillman, who manages these works, would undoubtedly say this is a very low figure, and he would claim the cost nearer thirteen dollars a ton. But, at the low cost of the stock, I am at a loss to know why iron cannot be made at the price indicated, and made with a profit.

"In the Tennessee iron-producing districts I found, for example, the Cowan furnace, at Cowan, using a soft red ore costing as high as $2.50 a ton. They have to haul ore from Rockwood and get it delivered under Lookout Mountain at $1.75 a ton, the freight from the making $2.50. The coke they get from their own ovens at Tracy City, and the furnace is charged five cents a bushel for it. The coal is mined, and coking done by convict labor, and the coke company makes a profit on the coke at five cents. I mention this because both the Cowan and the South Pittsburg furnace belong to the Tennessee Coal and Iron Company. Here is an estimate of the cost of a ton of iron at Cowan:

Iron ore	$5.65
Limestone	.50
Coke, at 5 cents a bushel	3.75
Labor	1.50
Incidentals	.50
Total	$11.90

"I believe, when we take into consideration the convict labor, iron ought to be made at Cowan for the above price. The proprietors claim that they can make it at twelve dollars and one-half. It will be noticed that labor on a ton of iron costs more in the Birmingham District, but material much less; the difference between $1.40 and $5.65 for iron ore and $2.25 and $3.75 for coke is considerable. . . .

"The great drawback, however, to Southern iron making is the cost of getting it to the great centers of industry, where it is worked up into a thousand shapes and forms. The hope of future importance for the new town of Sheffield is based upon the fact that the Tennessee River will furnish cheap transportation for the manufactured article, whether pig or a more advanced product. The best market for the South is the West, though both of the Virginia districts can ship East. . . .

"To sum up the results of this inquiry, it is safe to say that iron can be made with profit in the Birmingham District at from $10.50 to $13.50 a ton; that the great drawback to the success of this industry is the lack of dependent industries to consume the iron when made, combined, of course, with the disadvantages incidental to developing untried industries in a new country. The second of these difficulties time and experience will overcome; the first and greatest obstacle will never be overcome until such States as Tennessee, Georgia, and Alabama join hands with

the great manufacturing States of the North, and earnestly advocate the American system of political economy, with its diversified industries and home market. . . ."

To return now for a time to the movements of Henry F. DeBardeleben during this period, it seems that the colonel, ill and worn out, left the Birmingham District expecting never to return. Having sold out his Pratt Coal and Coke Company to Enoch Ensley and associates, he signed over to his former partner, F. L. Wadsworth, as trustee, all his various other mineral properties and interests, and went out to Mexico, where he took up sheep ranching near Loredo. He found that he did not have tuberculosis after all, and out in the free open-air life he gradually recovered his old health and stamina. He began to take little trips up to San Antonio, Texas, for here was scent of what was going on, and some taste for enterprise. It was the meeting-point, indeed, in the early eighteen-eighties of all the men who were building up the great Southwest.

One day, in October of 1881, Colonel DeBardeleben chanced to meet out there a Kentucky lawyer, William Thompson Underwood. Mr. Underwood was at that time engaged in straightening out defective land titles in Texas, owned by certain of his clients. Having a taste for speculation, he was interested more, perhaps, in real estate ventures and various industrial enterprises than in law practice. DeBardeleben's description of the Birmingham District, and the fact that some of his own Kentucky and Tennessee acquaintances—Major Peters, the DuPonts, James G. Caldwell, T. T. Hillman, and Enoch Ensley — had so recently invested there, led to Mr. Underwood's decision to look over the field. In the following winter — February of 1882 — he joined DeBardeleben, who was back in Birmingham by this time, and the firm of DeBardeleben and Underwood was formed, and the company capitalized at $300,000. The first move, one more blast furnace for Birmingham, was straightway begun. Thirty acres lying between First Avenue and the railroad right-of-way and Thirtieth Street and Avondale was bought of the Elyton Land Company, and construction work started on the Mary Pratt furnace (named for DeBardeleben's second little daughter, who is to-day the wife of the Birmingham lawyer, Walker Percy, attorney for the Tennessee Company).

The furnace went into blast in 1883, thus making, with Eureka Company, rolling mills, Alice, Edwards, Sloss, Linn, and Pratt

mines, the Cahaba Company and Woodward, the tenth well-launched venture of the coal and iron trade of the Birmingham District. DeBardeleben was out in the field a good deal, developing the Henry-Ellen properties he had purchased from Aldrich, and prospecting in the Blue Creek Basin, and going back and forth from Texas and Mexico. The management of the Mary Pratt Company, its financing and operation, devolved mainly upon Mr. Underwood. He opened and worked brown ore mines at Greenpond, and red ore mines at McShan Mountain, near McCalla on the Alabama Great Southern. He ran the Mary Pratt with excellent results, gaining a good annual output for a furnace of that period. The ore used was a clean, low sulphur brown hematite, and produced a high grade iron, largely in demand for foundry use; a grade that attracted a steady market in the East and North, and did much to counteract the prejudice existing there against Alabama iron. Mr. Underwood, by personal visits in 1884 and 1885 to consumers in New York, Boston, Fall River, Providence, and other eastern points, successfully introduced the Mary Pratt iron, and created a profitable northern and eastern market for the concern, thus opening the way to a more agreeable reception and interested inspection of the various brands of the Birmingham District.

In the spring of 1884 DeBardeleben and Underwood leased from the Alice Furnace Company a tract of ore land on Red Mountain and opened and operated mines at the point known as Reading (now owned by the Tennessee Company), with George L. Morris as superintendent. They subsequently contracted with Mr. Morris and his brother, Thomas Morris, for mining this ore. The opening of these mines caused the beginning of the Birmingham Mineral Railroad, the first four miles of which was built from the Louisville and Nashville main line at Graces Gap, in the spring of 1884, to haul ore for the Mary Pratt furnace.

From that time until now William T. Underwood has contributed to the upbuilding of the coal and iron business of Alabama the best efforts of his life and all the resources he could command. "Though," he has invariably stated, "my part was not large as compared with that of others, yet it has been enough to entitle me to feel pride and great interest in the Alabama mineral district, at all times, and anxiety for its welfare."

In addition to his management of the Mary Pratt Furnace Company, Mr. Underwood became a director in the First Na-

tional Bank, and in the Birmingham Trust and Savings Company, an early street railway company, and has been interested in other enterprises throughout the district. His development of the Blount and Etowah counties coal field during the late eighteen-nineties laid the foundation for some of the best of the Alabama Steel and Wire Company's holdings, and will be treated in the chapter relating to the Southern Steel Company.

Although born in Tennessee, W. T. Underwood spent his early years in Kentucky. His parents were Kentuckians of old Virginian ancestry.

The first of the Underwood family in North America was an English colonist who came with the Lees and others from Shropshire, about the middle of the seventeenth century, and took up a large grant of land under the Crown on the James River in Goochland County. A great-grandson of this colonist was Joseph R. Underwood, who went out to Kentucky as a boy, and, as mentioned in Chapter II, served in the War of 1812. This boy later represented Kentucky in the Twenty-fourth, Twenty-fifth, Twenty-sixth, and Twenty-seventh Congress; also served as United States senator from Kentucky from 1847 to 1853, and later on as Judge of the Court of Appeals. His son, Eugene Underwood, became a prominent lawyer of Tennessee, and was one of the original promoters of the Louisville and Nashville Railroad and its first lawyer. Two of his sons later to become identified with the industrial and political life of the State of Alabama were William T. Underwood, born in Nashville, Tennessee, July 24, 1848, and Oscar W. Underwood, at the present time United States Representative of the ninth district of Alabama. William T. Underwood, educated at the public schools of Louisville and at the Forrest Academy, was put to the law early, and admitted to practice in the Kentucky courts. He presently located in the Northwest, however, and ventured in the State of Minnesota with land deals and speculations. He came at last to see, as has been detailed, that the West was not to be compared to the new growing South as an investment field, so he eventually concentrated at Birmingham.

CHAPTER XX

THE NORTHEASTERN COUNTIES 1870–1890

Iron-making ventures after the war. Summary of Calhoun County operations. Iron men and United States Army officers in the lead. Beginning of Anniston. Résumé of Samuel Noble's career. View from Oxford Furnace ruins. "If ever I am able to build a town this is the spot I will choose." Handicaps ahead. Acquisition of Lloyd and Maddox properties. Raising capital. General Daniel Tyler visits region. Organization of Woodstock Iron Company. Description of first two furnaces. Successful operation under Noble and Tyler régime. Incorporation of town of Anniston. Transfer of Noble manufacturing interests from Georgia to Alabama. Assistance rendered by General Tyler. Formation of Clifton Iron Company. Purchase of Alabama Furnace Company. Erection of first coke furnaces of Calhoun County. Diversified industries inaugurated. Biography of John E. Ware. Liberal policy of Woodstock Company. Iron making in Cherokee County. Organization of Tecumseh Iron Company. Biographical sketches of General Williard Warner and N. W. Trimble. Work of General Burke. Stonewall Iron Company formed. Career of John S. Moragne. Events in Etowah County. Colonel Robert Kyle plants diversified industries in this section. Entrance of J. M. Elliott, Sr. Reorganization of Round Mountain Iron Works. Achievements of J. M. Elliott, Jr. Upbuilding of Gadsden and Attalla. Tributes to Samuel Noble. Death of the great iron-master. Influence of his personality. Reconstruction work in Bibb County. Four United States senators assume control of old Bibb Furnace. Entrance of Thomas Jefferson Peters. Organization of Brierfield Coal and Iron Company. Sketch of Frank Fitch. Cahaba Coal Field a wilderness in early eighties. John R. McLean of Cincinnati interested in mineral region. Discovery of coal seams of Hargrove, Piper, and Cane Creek Mines. Major Peters' plan of reconstruction. A million dollars invested in improvements. Causes of failure of company. Formation of Alabama Iron and Steel Company. Death of Major Peters. Sketch of George Frederick Peter. Outlook in Shelby County. Résumé of Horace Ware's achievements. Pioneer work in Texas.

THE making of the Birmingham District opened the way into new regions of achievement throughout the mineral belt. In the northeastern section, as well as in the other quarters, whose records have just been presented, fresh iron making enterprises gradually revived the country completely ravaged by the dogs of war. Although none of the antebellum furnaces of any marked State influence in the counties of Calhoun, Cherokee, Etowah, and Talladega were reconstructed, yet each, in turn, was a road-breaking work. Out of the ruins of

the Oxford plant, in Calhoun County, for instance, sprang a new growth, the city of Anniston.

An account of the pioneer iron making in this section was detailed in an earlier chapter. "Calhoun County can produce the written record of making pig iron back to August 12, 1843, and continuously to this date, 1909," says G. B. Randolph. "Seven furnaces have been built within the county borders. It is shown conclusively that this county furnished the iron that went into the building of our State capitol; that she sent iron to Mobile during our war with Mexico to make munitions of war to whip the Mexicans; that she furnished iron to make all kinds of utensils and tools for the household; implements for the farm and mines; salt kettle castings for mills as far east as the State of South Carolina; iron for the armor plating of the first ironclad gunboat ever built in the South, and also for the last boat to lower her colors to Admiral Farragut in Mobile Bay."

As the history of the Birmingham District, early and late, revolves around the activities of a few coal and iron men, so later, the history of the Anniston district, and that of the close neighboring towns of Gadsden, Attalla, Ironaton, and Talladega circles about a small group of far-sighted, practical iron men and United States Army officers. Chief among them are Samuel Noble, General Daniel Tyler, General Williard Warner, A. L. Tyler, E. L. Tyler, Robert Kyle, John S. Moragne, J. M. Elliott, General J. W. Burke, Eugene Zimmerman, and James, John, Stephen, George, and William Noble.

The history of Anniston dates from the day of the formation of the Woodstock Iron Company by the Nobles and Tylers in 1872, shortly after the founding of Birmingham. The man at the front of affairs, the eager, leading spirit of this particular quarter of Alabama was the iron-master, Samuel Noble. It will be recalled that Mr. Noble first came into Alabama during the Civil War, when, together with his father, James Noble, and his brothers, John and William, he prospected through the northeastern counties and built the Cornwall furnace as practically an auxiliary to the Noble iron works at Rome, Georgia.

Samuel Noble, the fifth member of a family of twelve children, was born in Cornwall, England, November 22, 1834, the same birth year of that other master workman of the South, Milton H. Smith, president of the Louisville and Nashville Railroad. Mr. Noble's career from childhood, in England and in the United

States, like that of each of his six brothers, was one of steady application under his father's training to the iron trade; "he toiled in the foundry, the rolling mill, and the machine shop." When the family removed from Pennsylvania to Georgia, young Sam Noble soon took the lead. It is known of him that as a boy he was "quick, masterful, brave, and intelligent, and these traits of character added to his prodigious energy and mastery of details soon put him in control of the business." Major Charles H. Smith of the *Atlanta Constitution* recalls how, during the war, Sam Noble would superintend the Cornwall Iron Works in Cherokee County, Alabama, by day, and then ride, by night, across country, to Rome, Georgia, attend to important business, and be back at his post by next sunrise, the round trip, forty-eight miles. "This was not rarely done, but frequently," says Major Smith. "His strong frame and iron will seemed incapable of being tired. He put as much labor on his mental and physical forces in one hour as most men do in a year. The night watchers of Rome knew his habits well, and would say, 'Sam Noble came in again at ten last night on the black pony, and left this morning before day. Don't he beat all for work? But it will tell on him after a while. See if it don't.'"

According to Miss McMillian of Anniston, the first time Samuel Noble saw the present site of Anniston was on one of these trips, when, in company with Bishop Quintard, he was keeping well in front of a Yankee raiding party from Columbus, Georgia, on his way to Rome. They passed the ruins of the old Oxford Iron Company's furnace that had been burned a short time before by the Federal troops. Mr. Noble afterwards revisited the spot, in company with Henry W. Grady and Major Charles H. Smith, and, pointing out to them, from the old furnace hill, the beauties of the view, he said: "If ever I am able to build a town this is the spot I will choose." In the last year of the war, Sam Noble was captured with his train, when getting provisions up in Tennessee. He was imprisoned in Nashville, but through his uncle, a Pennsylvania iron man, he was paroled. He obtained an order from President Lincoln, saving cotton from destruction, but it was rendered fruitless by the president's death. Upon the ironmaster's return to Georgia, he faced that which every Georgian and every Southern man was facing. Every vestige of his handiwork had been blasted off the earth by the Federal guns. And there was not one dollar's capital available for reconstruction

purposes. Sam Noble did not stop to mark time. He gathered together specimens of Alabama iron ores, and returned North, on the hunt for capital.

"In 1869," writes Miss McMillian, "Mr. Noble came back to the site of the Oxford furnace, and in company with Uncle Johnnie Lloyd, as he loved to call him, tramped for four days over the surrounding hills and valleys, looking into the quantity and quality of the ores." After each day's tramp Mr. Noble would discuss his plans for a town with Mr. Lloyd. The huge bowlder of iron ore on which they used to sit, in Mr. Lloyd's yard, is pointed out to this day as "Sam Noble's resting-place."

In 1871, with the financial assistance of the Quintards of New York, Mr. Noble purchased the Oxford properties and large, adjacent territory comprising undeveloped, brown hematite ores, and an extensive acreage of yellow pine timber, the whole property eventually aggregating one hundred thousand acres, cut by the Selma, Rome, and Dalton Railroad (now the Southern). There was no capital on hand for development purposes, however. Mr. Noble worked ceaselessly. When up in Charleston, in 1872, he visited Mr. A. L. Tyler, then acting vice-president of the South Carolina Railroad, with the hope of enlisting his interest. As it happened, Mr. Tyler's father, General Daniel Tyler, then president of the Mobile and Montgomery Railroad, was in the office the morning of the iron-master's visit. He became immediately interested in a discussion of the mineral properties of Alabama.

"I have had the iron business burned into me," the general said to Mr. Noble, "and have not forgotten my first experience, but if I can find a property that has on it everything for making iron, without buying any raw material, or bringing any to it, I might be tempted to go into the business again." [1]

At that time Daniel Tyler was over seventy years of age. His folk, like Aldrich's, were an old New England clan, his mother, a granddaughter of Jonathan Edwards, and his father, a soldier of the Revolution. Daniel Tyler was born January 7, 1799, in Windham County, Connecticut. Graduating from the West Point Military Academy in 1819, he entered the artillery branch of the service, in which he accomplished work of value to the United States army, in that he translated from the French various significant military publications. He was de-

[1] A letter from Samuel Noble in records of Calhoun County.

tailed abroad to collect data, and in 1829 was admitted in the school of practice at Metz, where he translated the latest French army system of artillery. In 1834 the young army officer resigned from the service and entered the ranks of the iron-masters, serving for a time as president of a little coal and iron company of Pennsylvania. After various unsuccessful attempts to make iron with anthracite coal (before the advent of David Thomas), Mr. Tyler went into the railroad business in which he achieved much prominence. At the outbreak of the Civil War Daniel Tyler returned to the service, being mustered in April 23, 1861, as colonel of the First Connecticut Volunteers, in which regiment he was eventually appointed brigadier-general. He later had command of the first division under McDowell at Bull Run, and served in Union forces until his resignation in April, 1864, when he again became identified with railroading. The chance interview with Samuel Noble seemed to reawaken his early enthusiasm in the iron business.

"I had but little idea," Mr. Noble observed, "that a man of his age would, on a second thought, take such a long and uncomfortable journey, and was surprised at his coming to Rome some ten days after our meeting for a visit of inspection. At that time there was no railroad station, and only three old unfinished houses at what is now the town of Anniston. So we stopped at Oxford, two miles below, where we found horses. He rode with me over the country, exploring every hill and valley, gathering information from everybody he met about the timber lands, limestone and rock quarries, their location and extent, and then going to the places indicated, and examining them himself. . . . Nothing escaped his observation. . . . I was surprised at his knowledge and practical ideas concerning the requisites of iron manufacture. We rode for three days in succession." The general talked very little about the property or his plans. "I will go back and bring up Alfred to look at it," he said. That was all. The upshot, however, was the organization of the Woodstock Iron Company, with A. L. Tyler as president, and Samuel Noble as secretary, treasurer, and general manager. The company bought additional ore and timber lands designated by Mr. Noble, and in 1872 erected their charcoal blast furnace No. 1, which was a forty-ton capacity plant, and turned out daily that quantity of car wheel iron, soon becoming famous in the iron markets of the North and finding rapid sale at from

forty to sixty dollars per ton. Concerning furnace No. 1 George B. Randolph notes: "This furnace had a fifty-two feet stack, and the bosh was ten feet in diameter. No. 2 was blown in on August 23, 1879. Both were charcoal furnaces, and nearly the same size. Their location was between what is now Noble Street and the Selma and Rome division of the Southern railroad, on the south side of Eighth Street. They continued in operation until the depression of 1893, when, after the change of owners, they went out of business; later they were razed, and now two cotton mills occupy the grounds." The two stacks afforded the company upwards of one hundred tons of the highest grade of chilling car wheel iron, which sold at fifty dollars per gross ton. The engines and all the machinery and iron castings entering into the construction of these two furnaces were made by Noble brothers, who served as their own draughtsmen, planning and executing every intricate detail. John W. Noble was the constructing engineer in charge. An enormous revenue to the stockholders was produced at the outset by this plant.

The little town which was beginning to grow up about the Woodstock furnaces was also known as Woodstock. Major Smith wrote in *The Atlanta Constitution* as follows:

"I remember when the great iron collapse of '73 came over our infant industries and crushed them. Etna and Stonewall and Round Mountain and Bartow and Ridge Valley and many others surrendered, and some were sold out by the sheriff, and some have never resumed, but the fires of Woodstock, as Anniston was then called, never went out. By day and by night the molten mass continued to roll from her furnaces, and every train carried her charcoal iron to northern markets. Iron had fallen from forty dollars a ton to eighteen, and the wonder was how Anniston could survive the shock. Sam Noble saw the impending crash and immediately shipped by express several parcels of the Woodstock iron to different northern points. He followed them in person. Arriving at Springfield, Massachusetts, he went into the government armory with a piece of charcoal pig under his arm. He laid it down by the trip hammer and said: 'My friend, I am one of the craft. I used to work right where you work at the trip hammer. I am making iron now and would like for you to try this sample.' The man did so willingly. When it was at a white heat he put it under a steam hammer and crushed it into form, and doubled it, and welded and hammered again and again. He bent it and twisted it with his tongs, and after careful and patient inspection said: 'This is the best iron I have ever handled; where was it made?' Mr. Noble told him,

Ruins of Old Tannehill Furnaces, Tuskaloosa County

Eagle Forge on Talladega Creek, Talladega County

Woodstock Charcoal Furnace, No. I, 1872, Anniston
Calhoun County

Old Tecumseh Furnace (Charcoal)
Cherokee County

saying, 'My friend, I wish to make a customer of this armory; will you help me?' The man called up the superintendent and asked him to inspect the iron, and the result was a new customer at a good living price; and so he followed up the other parcels and made more customers, and thus by keeping clear of the iron brokers, who had iron of their own to sell and would sell it before they would try to sell the consignments of others, Mr. Noble saved their commission and got a better price. This plan showed his sagacity in the time of peril and it kept the Anniston fires hot."

This same year witnessed the incorporation of the little town that had grown up around the Woodstock Iron Company. The name Woodstock was changed to Anniston in honor of Annie, wife of Alfred L. Tyler, and on July 12, 1873, the place was incorporated as the town of Anniston by order of the county judge of probate. It did not receive its charter from the State legislature until 1879. Four years later, in 1883, it was formally opened to the public by Henry W. Grady, editor of the *Atlanta Constitution,* and in 1887 its charter was amended and amplified by the legislature and it received its baptism as a city. In 1882 the Noble brothers brought their entire Rome manufacturing interests to the Woodstock locality, and put up a foundry for making car wheels, axles, furnace castings, and added shops for building railroad freight cars, ore, and coal trams, etc. These two furnaces and foundries and a cotton mill, which were built and placed in remunerative operation through the labor and co-operation of the Tylers and Nobles, formed the nucleus of the town of Anniston.

Late in 1882 General Tyler died in New York City and was buried in the Hillside Cemetery in Anniston. Up to the last he was always planning and suggesting something for the benefit of Anniston and its people. Samuel Noble says: "In acting on his suggestions and plans we found how wise he was in forethought. . . . To his earnest exertions and liberality we are indebted for the water works, the cotton factory, and the car works, the promotion of immigration, the successful cultivation of grasses, the introduction of blooded cattle and improved stock, large and more comfortable houses for the workingmen, and the building of churches and schools for them." [1]

[1] General Tyler's granddaughter, Edith Carew, became the wife of Theodore Roosevelt.

In 1880 the Clifton Iron Company was organized by Samuel Noble and his associates. He then negotiated the purchase of the Alabama Furnace Company property located on Salt Creek, nine miles from the Clifton property at Ironaton, and consolidated these two interests, naming the Alabama furnace community Jenifer, in honor of his mother. In 1884–85 he built at Ironaton two forty-ton charcoal furnaces and enlarged the one at Jenifer, thus having under his control and management five well-equipped, up-to-date charcoal furnaces, making car wheel pig iron of highest chilling quality and strength. In 1886–87 he completed the construction, in connection with the Woodstock Iron Company, of two large coke furnaces in Anniston with a capacity of two hundred tons each. The engines, machinery, and all iron work for these mammoth iron producers were made by Noble brothers in their Anniston shops.

Quickly following this enterprise Mr. Noble conceived the idea of building in Anniston pipe works for the manufacture of cast iron water pipe, and special casting for water lines. Carrying out this conception and plan to consume his coke furnace product, he organized the Anniston Pipe Works Company with $500,000 capital stock. These works were completed in 1888–89. The first order this plant received for its output was for eight miles of twenty-inch pipe mains to supply the city of Anniston.

Associated with Samuel Noble in various of his enterprises was John E. Ware, who was a son of the pioneer iron-master, Horace Ware, and has served in the iron business for twenty years, acting as secretary and treasurer of Clifton Iron Company, of the Anniston Pipe Works, and as general manager of Jenifer Furnace Company. John E. Ware was born at the Shelby Iron Works in Shelby County, December 4, 1849. He was educated at Howard College, Marion, and later entered the Virginia Military Institute, graduating in the class of 1871. For five years he was editor and publisher of *Our Mountain Home* in Talladega, and in 1881 went into the iron business. He retired in 1901 and the following year became a resident of Birmingham.

Iron making in Cherokee County was resumed in the early eighteen-seventies, immediately after the organization of the Woodstock Iron Company. Before the year 1880 the following companies were in active operation there: Tecumseh Iron Com-

pany, Stonewall Iron Company, Rock Run Furnace Company, Cornwall Iron Works, and the Aetna Furnace Company.

The Tecumseh Iron Company was organized in 1873 by General Williard Warner. Associated with him as stockholders and directors were General Joseph W. Burke of Illinois, N. W. Trimble of Alabama, Colonel A. E. Buck of Maine, Judge W. B. Woods of Ohio, Charles W. Buckley of Alabama, E. G. Barney of Mississippi, —— Merriman of Massachusetts, Captain Joseph W. Dimmick of Illinois, E. G. Stetson of Massachusetts, W. F. Mason of New York (who was secretary and treasurer), and general R. W. Healey of Illinois. General Warner acted as president and manager of the company until 1890, when the plant was shut down. Stephen Stucky of Oxford, Alabama, one of the expert pioneer furnace builders and operators in the State, was employed to build the furnace which was named Tecumseh in honor of General Sherman, and planned by General Warner. It was 12x60, and thus one of the largest charcoal furnaces in the country at that time (1874), and considered the finest plant, "architecturally," in the South. The furnace failed at first to meet the expectations of the constructors, as the output was only fifteen tons per day. In the eighties, however, when the plant was reconstructed after Mr. Stucky's designs, the output increased to forty tons per day and the furnace proved successful and profitable. The ore was brown hematite in the immediate vicinity of the furnace, and the charcoal was made in beehive ovens.

The projector of this company, Williard Warner, was a native of Ohio. Born in Granville, September 4, 1826, he was raised on a farm. He was graduated at Marietta College, 1845, and four years later struck out for California, and was like John T. Milner, one of the "forty-niners." He dug gold for a couple of years, then returned to Ohio and built and managed a machine plant at Newark. He served in the Union army as major and lieutenant-colonel of the Seventy-sixth Ohio Volunteer Infantry; as inspector-general on the staff of General William Tecumseh Sherman; as colonel of the One Hundred and Eightieth Ohio Volunteer Infantry, and was, at length, brevetted brigadier-general and major-general. After serving a term in the Ohio State senate, General Warner located in Alabama in 1867 and engaged in planting and raising cotton. He was elected a member of the Alabama Legislature in 1868, and in that same year to the United

States Senate. During 1871 he served as collector of the port of Mobile and was appointed by President Grant as governor of New Mexico. He declined the appointment, however, and went into the iron business of Alabama. When the Tecumseh works shut down General Warner removed to Tennessee, where some years before he had built other blast furnaces. He settled in Chattanooga, where he became identified with various interests. In 1900 he was elected to the Tennessee Legislature, and in 1905 served one term as commander of the Loyal Legion of the United States.

Of his associates in the Tecumseh Iron Company, General Burke was one of the most active, and, according to R. H. Edmonds, "accomplished a work for the South that was broad and lasting. . . . When General Burke was campaigning in Calhoun County," says Mr. Edmonds, "he was so charmed by the beauty of the scenery that he vowed to himself that whenever the war ended he would there build for himself a home." He did build that home, and, up to the time of his death, he was unceasing in his work for the material development of the State. He was among those who early foresaw the need of river and harbor improvement and gave special attention to urging the importance of this work upon the country.

Mr. N. W. Trimble, although born in Mississippi, at Holly Springs, the site of W. S. McElwain's first iron works, was reared in Nashville, Tennessee, where his father, Thomas Clarke Trimble, practiced law. During the war, N. W. Trimble served in the Confederate army. On his return home he again took up the study of law. He was admitted to the bar in 1866 and located in Montgomery, Alabama. He was appointed clerk of the United States court in Mobile, and in 1899, clerk of the United States court of the Northern division of Alabama, and afterwards as referee in bankruptcy. He was appointed receiver of the Mary Lee mines, and was actively interested in the Tecumseh Iron Company from the day of its organization until the plant shut down. Of the other directors and builders of Tecumseh, Colonel Buck became United States minister to Japan during President McKinley's term, and died in the Orient. Colonel Woods, a brother-in-law of General Warner's, afterwards became asociate justice of the United States Supreme Court. Judge Buckley represented Alabama in the United States Congress, later acting as probate judge of Montgomery County, Alabama,

and, at the time of his death, in 1906, was postmaster at Montgomery.

The Stonewall Iron Company's plant, like the Tecumseh furnace, was also situated on the Selma, Rome, and Dalton Railroad, and about three miles from the Georgia line. Its yield per day was eighteen tons charcoal pig iron. The officers of this company were J. M. Selkirk, president; J. W. Bones, secretary and treasurer, and William Wurts, superintendent.

The Rock Run furnace, owned by J. H. Bass of Fort Wayne, Indiana, was rebuilt in 1879–80 and operated always as a private enterprise, and as practically an auxiliary of the Bass Car Wheel plant in Indiana.

Among the pioneer mining men of the Cherokee County was John S. Moragne, who, in conjunction with John W. Duncan, mined and shipped iron ore out of the county in 1873. Mr. Moragne, born in 1814, in the Abbeville district of South Carolina, represented Cherokee County in the Alabama Legislature in 1851–52. He named Etowah County and the towns of Gadsden (of which he was one of the founders), and Attalla. Up to his death in 1881 he was an active worker for the mineral development of both Cherokee and Etowah counties. Iron making records of both of these counties are closely interwoven. Post bellum operations in Etowah County were the Round Mountain Charcoal Blast Furnace Company, the Gadsden Furnace Company, and the Gadsden Iron Company. Among the men most active in the mineral development of this particular section are recorded the names of Robert B. Kyle, James M. Elliott, Sr., and James M. Elliott, Jr.

Colonel Kyle, by birth a North Carolinian, was one of the early railroad contractors of Alabama. He settled in Gadsden late in the fifties, and became practically the leader of the town. Like Colonel Sloss he made his mercantile interests the basis for far reaching lines of industry. He served in the Confederate Army during the war, and directly after the close of hostilities began construction work under contract on the Alabama and Chattanooga Railroad, and also resumed his mercantile business. In conjunction with W. P. Hollingsworth, Colonel Kyle built the Gadsden branch to Attalla and started the lumber business of that district, forming the Kyle Lumber Company. He then established the Gadsden Land and Improvement Company, and organized, in the eighties, the Gadsden Furnace

Company. This plant, which was one of the largest coke furnaces in the South in 1887, having a capacity of one hundred and twenty tons, was located on the Coosa River, close to the Rome and Decatur Railroad.

James M. Elliott, Sr., born at Sandy Ridge, North Carolina, November 22, 1822, was one of the early settlers of Rome, Georgia, and one of the pioneers in the steamboat business of Alabama. In 1857 he acquired the Round Mountain iron works whose early records have been presented in another chapter, and in 1871 reorganized the plant as the Round Mountain Coal and Iron Company and increased its capacity from seven to twenty-five tons per day. He also established the Elliott Pig Iron Company.

His son, J. M. Elliott, Jr., was born November 12, 1854, at Rome, Georgia, and was graduated from Emory and Henry College, Virginia, in 1874. He moved to Alabama in 1877 and located at Gadsden. Like his father he started into the steamboat business as clerk and eventually became general manager and president. He also took up the lumber business in Alabama, Kansas, and Texas, and in 1887 he organized the Elliott Car Works Company of which he served continuously as president and general manager for seventeen years. Captain Elliott was also connected with the Kyle Lumber Company, and succeeded his father as president of the Round Mountain Works, and as president of the Elliott Pig Iron Company. This Round Mountain plant furnishes all the high grade car wheel chilling iron used in this car works. Stephen Stuckey, who was engaged in the reconstruction of almost every plant of this region, also remodeled the Round Mountain works. The building up of Attalla, another furnace town of Etowah County, was coincident with the growth of Gadsden. The town was located five miles west of Gadsden on the line of the Queen and Crescent route, and has during recent years become a railroad center and an important point in the mineral region. At the present time, Gadsden is the center of operations of the Southern Iron and Steel Company.

In Talladega County the Talladega furnace, which had been built by English capitalists, passed into new hands. Eugene Zimmerman of Cincinnati (father of the Duchess of Manchester) purchased the plant from creditors and attempted to put it on a profitable basis. In De Kalb County, along the line of the A. G. S., a marked degree of prosperity was shown late in

the eighteen-eighties. "Boom towns" sprang up all over the county, chief among them being Fort Payne, the county seat. Here two blast furnaces and a steel plant were eventually constructed, but never operated. Practically the entire town was later owned by Edward Northcroft Cullom of Birmingham, and the plants were dismantled and sold for scrap iron.

During the years of this activity in the mineral development of these northeastern counties, the town of Anniston, under the régime of the Nobles and Tylers, continued to progress. Every dollar made by the Woodstock Company was put into the making of this town. Streets were macadamized and shade trees planted. Churches and institutions were founded, among them being the church of Saint Michaels and All Angels, the Noble Institute for girls, a boys' high school, and homes, factories, storehouses, mills, a depot, and an inn. The foundations of the city were laid out on an extensive and durable plan. "I am planting for posterity," said Samuel Noble. According to the *New York Times*, "In building the city of Anniston, Mr. Noble evinced a genius that was superb in its all-embracing completeness. From a rugged, unsightly landscape there sprang, as if by magic, beauty, order, and prosperity, — a well planned, well governed little city. . . . In twelve years Samuel Noble created from the matrix of worthless clay and unsightly gullies an estate that was assessed on the State's tax books as worth seven and one half million dollars." From 1872 until 1883 practically the entire town of Anniston was owned mainly by members of the two families, Noble and Tyler. Anniston, from the beginning, was made by Samuel Noble a prohibition town. Major Smith writes:

"Mr. Noble once said to me: 'I 'm troubled about these humble people spending their money for beer and whiskey. Their families need that money and they shall have it. They spent twenty-four thousand dollars last year at our saloon, and my share of that money burns in my pocket; I am going to break it up. Their families shall have it.' Not long after this he closed the saloon, — the only one in Anniston, —and he made the workmen a speech — so convincing and effective that they sustained him, and the wages that had been spent for beer were placed in the bank and drew interest, and a new life was given to the laboring people. We met one of them — a German — as we were walking around, and Sam Noble took him by the hand with a cordial greeting and said: 'You are almost well again, Jamie; you look a good deal better than you did a week ago. How are your wife

and children?' 'All well, bless God; and you, too, Mr. Noble! We are all right, and I'll be at the furnaces again on Monday. I have six hundred dollars in the bank now, and don't mind a little sickness now and then; but you know when we used to run the beer I never had a dollar in the bank. Bless God, and you, too, Mr. Noble, for stopping it!'"

John E. Ware writes:

"In all of Samuel Noble's varied activities, in planning, conceiving, in execution, and in operation, he was continuously and closely allied in sympathy and in interest with his brothers, John W. Noble, William Noble, James Noble, George Noble, and Stephen N. Noble, all of whom were iron men of note, and the success of each and the success of their combined efforts attest their ability, their energy, and their determination. The stressful labors and lofty purposes of this family, born and reared to incessant activity, as a whole, or as individuals, were not given over wholly to material interests and the accumulation of wealth for wealth's sake, but the moral, religious, educational, and social side of the diversified concerns of human life strongly appealed to them and received liberal attention at every step and turn of their advancement."

John W. Noble, founder and sole builder of the church of Saint Michaels and All Angels served as the constructing engineer in various of the works undertaken by the brothers. He was also one of the reorganizers of Jenifer Furnace Company in Talladega County.

Before coming to Georgia James Noble had worked in Pennsylvania as foreman of the Philadelphia and Reading shops. He welded the first locomotive tires ever cut and welded in the United States. It was he who, later on in Rome, Georgia, in 1857, constructed at the Noble shops the first locomotive built south of Richmond, Virginia, "the Alfred Shorter," which, with the "Willis J. Milner," have been mentioned in the war period. James Noble, Jr., served as mayor of Rome in 1864–65. He also became associated in various enterprises in Macon and Atlanta before removing to Anniston in 1880, when he became a partner in the Anniston Foundry and Machine Company, and served also as mayor. He died February 10, 1908.

Stephen N. Noble, who met a tragic death in 1908, was the youngest member of this family of iron-masters. He constructed the "Little Clifton Railroad" from Jenifer to Ironaton. As superintendent of Jenifer furnace he doubled its output in his

first year of management, and gave the plant the lowest freight rate it had ever had. He founded the little town of Ironaton and was the builder of the first furnace at that point.

Altogether the most significant results were accomplished throughout all the northeastern counties by the members of this Cornish family of iron workers. Samuel Noble, alert and energetic, "kept as ever to the forefront." During the years 1882 to 1888 he accomplished an immense amount of work. After organizing the Clifton Iron Company, now a part of the Alabama Consolidated Company, Samuel Noble built a line of railway from Anniston to Gadsden and Attalla, making valuable competing freight connections at those points, and another railroad to Sylacauga via his Talladega furnaces and mines, making connections with the celebrated Blocton coal territory for furnace and factory fuel. His associate, John E. Ware says of him:

"He conceived industry after industry and executed with military promptness and precision, each succeeding movement and stroke having direct reference and bearing to the former and every detail worked out and into a beautiful and practical consummation. He was an iron-master in the broadest sense, a business man of wide scope and minute account; and nothing in the manufacturing and industrial line was too intricate for his delving or too great for his undertaking and bringing to remunerative finish. There was system in his every movement, a wellthoughout purpose in his every forecast, a thorough understanding of what he proposed to accomplish, and all that was practicable and for the betterment of his people and his State. The zeal of his indomitable spirit, his matchless energy, the intensity of his very nature, his knowing when to do and how to do all combined, and working to a common point, present the key to the success of his wonderful achievement in the world of labor. He knew men and how to manage them, and they in turn highly regarded him; and having the utmost confidence in his integrity and ability, they always rendered to him the best of their skill and energy in carrying forward to success all of his industrial projects. To-day the formative and preservative influences of his work are evidenced and realized in many ways, whenever and wherever you take in Alabama's material growth and prospect.

"In almost every street in Anniston to-day are evidences of his handiwork. It is no disparagement to any of his associates to accord to him the high place of leader. His plans were so far reaching and his execution so brilliant and successful, his energy so untiring, his skill so resourceful, his financiering ability so masterful, and his judgment and discernment so unerring that

he easily ranks among the foremost of America's industrial captains. . . . He died in 1888, at the age of fifty-four years." [1]

There is no instance in the history of the South when a man in private life received at his death such tribute as did Samuel Noble. Delegations from the cities of Georgia and from nearly all the towns of the mineral region of Alabama attended the iron-master's funeral. The members of the Gladstone Lodge of the Sons of Saint George adjourned meeting and appointed a committee to draw up resolutions of respect towards "one of the greatest of their countrymen in the United States." Special trains were run from Rome, Georgia, and hundreds of Georgians, who claimed Samuel Noble as chief iron-master of the State of Georgia, assembled. It was estimated that over five thousand people gathered in Anniston on the funeral day.

Various efforts were made during these years that witnessed the growth of Birmingham, Anniston, Gadsden, Florence, Decatur, and Sheffield to restore the iron business of Bibb and Shelby counties to its former state of emprise. An account of the reconstruction of Bibb furnace and of its management for a brief space under General Gorgas has already been given. When in 1873 both furnace and mill suspended operations they passed again to the control of a former management,—Colonel Huckabee, Alexander Knowles Shephard, Robert McCalley, W. D. Carter, Kearsley Carter, and William Douglass of Louisville, Kentucky. The plants were tied up in the courts more or less. Senator John T. Morgan had some stock in the property and it was

[1] After Samuel Noble's death the Woodstock plant was operated by Walter Crafts of Ohio. In 1897 it passed into the hands of J. M. Barr of Norfolk, Virginia and J. B. Carrington of Richmond, Virginia. The Woodstock Iron and Steel Corporation was organized with Mr. Barr as president and Mr. Carrington as vice-president. Mr. Carrington came into Alabama in 1885, and was connected first with the Virginia and Alabama Mining Company as a mining engineer, and later with the Sheffield and Birmingham Coal, Iron, and Railroad Company, after which he went into the coal business. Although born in Richmond, Virginia, December 24, 1859, J. B Carrington located in the West, where he was engaged in railroad and mining engineering. He was connected with the Richmond and Allegheny Railroad in 1884. In 1890 he married Miss Leila Gamble, a daughter of Judge Gamble of Walker County.

Upon acquiring the Woodstock property, which had lain idle for some time, Mr. Barr and Mr. Carrington inaugurated a big reconstruction work. The expert furnaceman, John Dowling, was employed and the furnaces have been entirely remodeled. An item of importance relating to the old company is that the first spiegeleisen made in the United States was, according to Dr. Eugene A. Smith, made there.

through him that United States Senator Plumb of Kansas, United States Senator Morrell of Vermont, and United States Senator Fair of California eventually took hold of the financiering end of this company. A big railroad contractor and mining man of Kansas, Thomas Jefferson Peter, also became interested, and after a tour of inspection, undertaken at the request of Senators Plumb and Morgan, Major Peter, together with his distinguished associates, contracted for the purchase of the Brierfield rolling mill, foundry, and machine shop and all its lands, and also for the purchase of the Bibb furnace and its properties. This latter concern then (1881) owned by the Messrs. Carter was under the management of Frank Fitch.

Although a native of New York Mr. Fitch had been engaged in the iron business of Kentucky for twenty years. He had been the owner and operator of the Red River iron works, had built blast furnaces, and opened coal and ore mines. He projected and practically built the old Sterling and Menifee Railroad. In 1880 he entered Alabama and took charge of Bibb furnace. He has been a citizen of Bibb County ever since, and has effectively promoted the construction of steel bridges and good roads, introduced road machines, and interested himself generally in the welfare of this quarter of the mineral belt. As administrator of the estate left by the pioneer iron-master, Jonathan Newton Smith (whose daughter he married in 1882), Mr. Fitch has had charge of extensive coal and iron interests of Bibb and adjoining counties. The celebrated Belle Ellen and Piper coal mines are on the Smith estate.

As soon as Major Peter and associates acquired control of the Brierfield plants and mineral lands they organized the Brierfield Coal and Iron Company, of which Major Peter was made president and general manager, and John G. Murray, secretary.

Thomas Jefferson Peter was born in Baltimore, January 7, 1835. His parents moved to Cincinnati in 1839 and he entered Saint Xavier College. At the age of sixteen he joined an engineer corps in the location and construction of the Ohio and Mississippi Railroad, and was engaged in the capacity of engineer on various railroads until 1855, when he was appointed city surveyor of Cincinnati. In 1857 he was elected city civil engineer of Cincinnati. He held this position for two years, and was then appointed chief engineer of the Eastern Texas Railroad. In 1861 he returned to Cincinnati and was re-elected city civil

engineer. Two years later he commenced the construction of the Whitewater Valley Railroad, in Indiana, as engineer and contractor. From that time until 1868, when he removed to Kansas, his contracting firm built many hundred miles of railroad in the Western States. Chief among them was the Atchison, Topeka, and Santa Fe Road. He pushed this road to the western boundary of Kansas. As general manager he adopted the policies which caused a rapid development of that section of the country and the wonderful growth of this railroad system. One of the policies that he inaugurated was the carrying of coal at the bare cost of transportation to assist in development. He located valuable seams of coal in Kansas by the use of diamond drills, and began the development of mines in Osage County.

In 1873 he resigned as general manager of the Atchison, Topeka, and Santa Fe Railroad, and from that time until 1881 he devoted his energies to the mining of coal and manufacture of coke in Kansas and Colorado. In the fall of 1881 he returned to his home in St. Louis with the intention of retiring from business. It was at this time that he was induced to visit Alabama and his interest in the Brierfield property immediately followed.

The Cahaba coal field was at that period but little known. As mentioned in former chapters even the "bomb proofs" had been abandoned and were overgrown in weeds. There was no Blocton then. Belle Ellen, Hargrove, Piper, Coleman, Garnsey, and all the famous group west of Blocton were not then even dreamed of. John R. McLean (present day owner and editor-in-chief of the *Washington Post* and of the *Cincinnati Inquirer*) sent a geologist, —— Sayler, down to inspect the region.

Mr. Sayler located coal at the points where Hargrove mines are now operated, and where the Cane Creek mines of the Bessemer Company were later opened. His investigation led to the immediate development of this portion of the Cahaba field. The Brierfield Coal and Iron Company took the lead at once in mining coal here. Major Peter's first step was the consolidation of his various properties. A railroad line was then built from Brierfield to the furnaces. Reconstruction work was commenced, and a million dollars, it was said, was put into improvements. The furnace and rolling mill were remodeled, a large nail factory built, and coke ovens and a coal washer constructed. Coal mines were opened in Shelby County at Petersburg. In a short time

they had an output of about five hundred tons a day, part of which was sold on the market, and part washed and made into coke for the use of the furnace. The company opened up mines on what are known as the Overturned Measures. They found workable seams of high quality, but had difficulty in obtaining miners as there were no miners in Alabama accustomed to working on steep pitching seams. It was necessary, therefore, to import men from Pennsylvania. They were brought down by the train load. In the development and operation of the rolling mill and the nail factory it was also found that there were no operatives in the State that could be had in sufficient quantities for these plants, and again the company had to resort to importation of men from Pennsylvania and other States. Five hundred men were on the pay roll. As soon as the product of the nail plant had been perfected, Brierfield nails began to get a big hold in the Southeastern States, but by the time they had been on the market for a year, the iron cut nails began to be supplanted by steel cut nails which they had just begun to manufacture in the Pittsburg district, through the perfecting of steel for commercial usages. Within a year the price of iron cut nails dropped from a basis of $3 per keg to $1.90 per keg, and the Brierfield Coal and Iron Company found that instead of enjoying a handsome profit, they must lose money if they continued in operation on this basis. Finally in 1888 the company was forced to go into the hands of a receiver.

Nothing daunted, Thomas J. Peter undertook and carried through a reorganization of this company, and created the Alabama Iron and Steel Company, a company which took over the properties formerly held by the Brierfield Coal and Iron Company. Major Peter believed that steel could be made a commercial success in this district so that he could again put the Brierfield nail plant in operation. He changed the furnace from a coke furnace to a charcoal furnace, and during the next few years this property made a considerable reputation by its Bibb charcoal iron. The panic of 1890 struck this company just as it was struggling into existence, and continued financial difficulties throughout the country from 1890 to 1894 again forced this company into the hands of a receiver in May of that year. Major Peter was appointed receiver, and finally succumbed to the terrible strain that he had gone through in endeavoring to make this pioneer movement a success. He died in October,

1896. Since 1890 the wire nail in turn has driven the steel cut nail from the market so that the nail plant at Brierfield became completely worthless. There was much litigation over the property. The body of employees sought work elsewhere. The town became practically depopulated and the works sold for scrap iron. The company's affairs were subsequently reorganized by the heirs of Senator Plumb of Kansas and his associates. The property is now owned by the Southern Mineral Land Company of which Herman Pfaff is president. With the exception of some of its coal lands which are being operated under lease, it is not in operation at present.

Major Peter's son, George F. Peter, is president of the Southern Coal and Coke Company and of the Climax Coal Company. He was born in St. Louis, Missouri, April 5, 1869, and was graduated from Yale University in 1890. In the fall of that year he came to Alabama and was associated with Alabama Iron and Steel Company at Brierfield as charcoal manager, and later as superintendent until the winter of 1894. In August of 1895 he began the development of the coal mine at Maylene, and late in the nineties opened up Glen Carbon.

About the time that the Brierfield plant was reconstructed by Major Peter, the veteran iron-master of this section of Alabama, Horace Ware (termed by Senator Morgan *facile princeps* among the pioneer iron-masters) left Alabama to manufacture iron in Texas. In casting his lot in that distant section, he enrolled himself among the pioneers in such work in the Lone Star State. Having been accustomed to the handling and use of only the very richest and best brown ores in Bibb, Shelby, Talladega, and Calhoun counties, he said that if he could find another deposit that would produce an iron nearly or equal to these he would purchase the same. He prospected in Georgia, Arkansas, and Texas, and in this latter State, in Marion County, near the town of Jefferson, he found a rather wide expanse of surface brown ore that in quality came up to his expectations and requirements. This property was owned by a Mr. Kelly who in the early seventies had started in a small way making cow-bells, and, of course, to the far west of that locality, where prairies and stock raising abounded, he met with a reasonable success.

Extending his enterprise further Mr. Kelly erected an unpretentious old style blast furnace of about four tons' capacity, of an 1850 make. Horace Ware bought this plant in 1881 at a

cost of $25,000 and at once razed the quaint little stack and built a furnace of modern style and equipment, which he named Ware furnace. He was the president, while George W. Brown became manager, and W. C. Denson secretary and treasurer. Prior to the Kelly enterprise, and, in fact, before the Civil War, there was a primitive furnace plant at Rusk, Texas, which was destroyed during the war and revived afterwards under the management of the State. Iron making in Texas had been very limited, and had accordingly failed to draw skilled workmen. For this reason Mr. Ware was put to the expense and trouble of taking skilled laborers from Alabama. He operated the Ware furnace for three years and made a charcoal car wheel iron that rapidly advanced to the front rank of such brands in the Western markets. In 1884, on account of the very great distance from his Alabama home, and his advancing years, Mr. Ware sold his Texas furnace property to the Marshal Car Wheel Company.[1] He returned to his Birmingham home where he died six years later.

He had given to the iron industry of Alabama fifty years of continuous effort and indefatigable energy. Beginning in the eighteen-twenties, as a boy, he advanced step by step from the making of forge blooms to charcoal furnace pig iron, and from pig metal to rolling mill wrought bar and plate, and from this to semi-steel on a limited scale, and was first directly instrumental in proving that Alabama ore and iron were specially adapted to the manufacture of the highest and best grades of steel products. He was the discoverer of large bodies of brown ore in Shelby and adjoining counties and laid the foundations for much important work not only in the northeastern counties, but up in the Highland Rim as well, for he was one of the first enthusiasts and investors in the Sheffield district. He crowned his useful life-work as a pioneer iron-master in the great commonwealth of Texas.

[1] Now, twenty-eight years after Horace Ware developed and established the superior value of these Texas ores for car wheel and other high grade purposes, the mineral property is beginning to attract the attention of Birmingham capitalists and manufacturers.

CHAPTER XXI

THE GREAT BOOM OF BIRMINGHAM 1886–1887

Colonel DeBardeleben assembles new forces. "His siren tongue lures many a man upon the rocks of Alabama." David Roberts takes a look at Birmingham District. Biographical sketch of Mr. Roberts. Incorporation of DeBardeleben Coal and Iron Company. Founding of Bessemer. Sensation of the day. "I am the eagle." Industrial enterprises of early eighteen-eighties. Entrance of William P. Pinckard. Review of Mr. Pinckard's pioneer work and present day operations. Introduction of Major R. H. Elliott. John Dowling's career. First step in modern blast furnace practice. "Alice" goes into eclipse. "King David" at the lead. General survey of mineral district. Contemporary events. Colonel DeBardeleben's picturesque methods. Rise of Birmingham. Incorporators of first banks. List of pioneer land companies. Formation of House of Milner and Kettig. Sketch of William H. Kettig. Influence of DeBardeleben Coal and Iron Company. DeBardeleben plays him the tune of the chief. Coming of the great Boom. Caldwell's vivid account. Jefferson County lifted from rank of pauper. Impetus given to State. Birmingham introduced to the world. Men of the Old Guard.

SHORTLY after the Mary Pratt furnace went into blast Colonel DeBardeleben was forced to make for the Southwest again. Camping out on his Loredo ranch he soon pulled himself together. Recuperation with him, like everything else, was swift-footed. His strong-winged temperament has always carried him triumphantly over obstacles that would make the average man collapse. No matter how blasted his business affairs, his health, and his fate one day, a good night's sleep will change for him by next sunrise the very face of destiny. There is that in him, indeed, the urge, the verve — born between the dark and the dawn — to which men give the name of genius. So, fortified anew, and his brain again teeming with big-drawn schemes, DeBardeleben started back to Alabama in the fall of 1885. He stopped off as usual at San Antonio, where he joined an old Scotch crony, Alexander Conechar, "lineal descendant," Conechar always claimed, "of Conechar, King of the Scots."

Mr. Conechar was in the employ of the largest phosphate mining concern in the world, whose headquarters were at Charles-

ton, South Carolina. One of the firm representatives, David Roberts, was at that very time in San Antonio. Conechar said he would introduce DeBardeleben to him. No one knew better than DeBardeleben that if the forces of capital and influence represented by Mr. Roberts' firm were once enlisted on Alabama soil they could whirl the State around. At the meeting he therefore drove straight to the point. "Those pictures of DeBardeleben," Llewellyn Johns has said, "those winning smiles, and that Italian hand — ah!" and he nods his head, "Y' know, y' know! There 's never a time they failed!"

"It 's many a man," once exclaimed Augustine Smythe, "has been lured upon the rocks of Alabama by that siren tongue of DeBardeleben!" Just as Du Pont and Caldwell, as Hillman, Sloss, Ensley, Underwood, and M. H. Smith had "fallen," so now did David Roberts. Instead of returning, according to his plan, to Charleston, Mr. Roberts agreed to visit DeBardeleben and take a look at the Birmingham District. Now a look at the "Birmingham District" with Colonel DeBardeleben as its interpreter was usually fatal to any man with money in his pocket. It meant excitement; it meant investment; and, to savor the melodramatic, it meant the dream of millions.

When David Roberts left Birmingham, under the spell of Red Mountain, of the coal fields of the Warrior, the Coosa, and the Cahaba, he carried a six months' option on 30,000 acres of DeBardeleben's lands. He at once interested his business associates, Robert Adger, Andrew Adger, E. H. Lopez, Augustine T. Smythe of Charleston, and Alexander Brown of Baltimore. Not stopping to mark time, Mr. Roberts then went across, engaged the capital and the enthusiastic coöperation of several of the big commercial men on the other side. Among them were F. F. Gordon, C. C. Wyllie, E. H. Watt, Dilwynne Parrish, and Alfred Parrish, — all of London, England. Thus in 1885 there was added to the Cleveland iron-masters, who, under Thomas Whitwell and James Bowron, Sr., began work in the Tennessee Mountains in 1874, a second group of Englishmen exerting influence upon the mineral development of the South.

David Roberts was himself a Welshman. Anglesey was his birthplace, — a solitary little farm on that treeless and cromlech-planted island, near the hundred-year-old copper mines of Parys and Mona and the ruins of the old Roman camp of Holyhead. It is a forlorn, low-lying, rugged little island, sea-lashed and

wind-beaten, shivering under ancient Druid memories, as under that cold mantle of the deep-sea fog that wraps it more than half of every year. Like to so many of his kin, young Roberts early felt the call to some far country. With another boy whom he knew in London, a bishop's son, he made plans to venture into Australia, and travel by horseback a thousand miles into the interior, "armed with many weapons," and take up sheep farming. With their passage engaged, the elated boys were at Liverpool on point of embarking, when the bishop himself came down to the dock to take a look at the ship. Scenting what might have turned a case of shanghaiing, the bishop got his son from off the gangway, and a London banker friend offered David Roberts a berth in his Bond Street office, suggesting the wisdom of deferring Australia and of trying the Rocky Mountains of North America instead at a later day.

The "later day" did not come, however, until 1873, when young Roberts, grown conservative and switched off from even the Rocky Mountain idea, came across to Charleston, South Carolina, with solid English interests backing him, and eventually became allied with the leading business men of that city. He married Miss Belle Sumter Yates, a Charleston girl, there, for whom at a later time the Belle Sumter mines, now owned by the Tennessee Coal, Iron, and Railroad Company, were named.

So it came about that late in the year of 1885 David Roberts found his way to the Alabama field. With sure financial backing on both sides of the Atlantic, the Roberts option was taken up for one million dollars. DeBardeleben threw in his own individual holdings, and the DeBardeleben Coal and Iron Company was incorporated early in 1886 and capitalized at the outset with two million dollars. This doubled the Ensley deal and made another sensation. Colonel DeBardeleben was elected president of the company; David Roberts, vice-president and general manager; and Andrew Adger, secretary and treasurer. The stockholders and board of directors comprised these officers and the business associates of Mr. Roberts in Charleston and London. On March 22, of 1886, there appeared in the Birmingham *Age-Herald* this little story:

"Sunday morning when the 1:05 passenger train on the Georgia Pacific road left the depot there were three men on board. They were H. F. DeBardeleben, Augustine T. Smythe, of Charleston, and an *Age-Herald* reporter. Mr. DeBardeleben said: 'I

have a big scheme working that will be news to the people of Birmingham, which will develop in a few days.' When the three men stepped on board they all scattered and were soon apparently sleeping in their respective seats. Mr. DeBardeleben's head rested on a large mysterious roll wrapped securely in white paper.

"'The party stopped at the Kimball House (in Atlanta). After breakfast the three fellow-travelers met. Mr. DeBardeleben said to the reporter, 'Hello, what are you doing here?' The reply was, 'What are you doing here?'

"'Oh, nothing; only going over to Charleston on a little business.'

"'Does it mean good to Birmingham?'

"'Come up to my room and we will see.' . . . In Mr. DeBardeleben's room was the mysterious roll, which he began to unwrap. It was a large map of North Alabama, highly colored and platted off to show the possessions of different parties. He said as he pointed to a spot on the map thirteen miles below Birmingham around Jonesboro: 'Here is where we are going to establish a young city. . . . I am now on my way to Charleston with Mr. Smythe and we are going to organize a company. . . . We are going to build up a city that will contain eight furnaces within two years, and we propose to extend two railroad lines touching Tuskaloosa and another outlet to be determined on. We are going to build the city solid from the bottom and establish it on a rock financial basis. No stockholder will be allowed to come in who can't make smoke. It will take $100,000 to come in, and the man who can make the most smoke can have the most stock.'

"'What is your object in going so far from Birmingham to do all this?'

"'My dear sir, thirteen miles is not far from Birmingham. In less than two years the two cities will have a population of two hundred thousand. The story of the place is not yet told. It is only a village. I have bought in the past two weeks $125,000 in real estate, centrally located, that I have paid high prices for. That property is not for sale in Birmingham. I am going North and place it on the market.'

"'When will you begin operation on your proposed scheme?'

"'At once. We will organize Monday afternoon, and I will visit New York to place some Birmingham property on the market, and will then go through to Pittsburg to order material for two furnace plants and make arrangements for the steel plant we propose establishing at Jonesboro.'"

The neighborhood around Old Jonesboro was, in fact, the right location. Here were the raw materials, and this was the most advantageous place for a great steel mill.

DeBardeleben says: "After months of prospecting and of thought, deliberation and travelling and inspection for miles and

miles around, and wearing out several fox-trotting horses, going from Tannehill to Rising Fawn in Georgia, I could not but feel that here was the opportunity for industries and manufactories of many and various kinds. The place has at command the entrance to two coal fields; is, in fact, the gateway to the Cahaba and Warrior fields. Thus by her geographical and geological position she commands and owns three of the greatest commercial banks in the South. Each, with the proper endorsement, will honor the greatest drafts that may be made upon them. The first is the Red Ore Bank. The next in importance is the Warrior Coal Bank. . . . The next is the Cahaba Coal Bank. There is a whole township of coal in the Dailey and Montevallo basin, to say nothing of the Blocton and Scottville ends. . . . These fields are intended by nature to feed some great creature. I could easily say that these banks would sustain and care for a population of half a million people. There are some few of us who are fully aware of the ore situation. The red ore tributary to this location has greater tonnage and is better in quality than all the balance of the State."

One of the DeBardeleben Company's mining camps, known as Iron City, was within bow-shot of the site of old Fort Jonesboro, whose history was related in the early records of Jefferson County. It is just about thirteen miles southwest of Birmingham. This was selected as the center of the new town. Here in a pine-board shack, at the office of the Pinckard and DeBardeleben Land Company, the men of the DeBardeleben Coal and Iron Company came together to draw up the by-laws of the town.

"Even then," observed David Roberts, "the notion of steel making in Alabama was buzzing around. It was Mr. DeBardeleben's idea to make that particular point a steel-making center. We all cast about for a name that might suggest the steel idea. I remember we had quite a discussion in the office, and then DeBardeleben, who was always very happy about things of that sort, you know, said 'Bessemer — call it Bessemer' — and we did."

Thus, in tribute to Sir Henry Bessemer, inventor of the steel-making system that revolutionized the world, the mining camp of Old Fort Jonesboro was given name. The realty company organized to carry on the work of making this town was incorporated January 6, 1887, with DeBardeleben as president and his associate officers and directors, A. M. Adger, David Roberts,

Moses E. Lopez, A. T. Smythe, and William Berney. The company was capitalized at two and a half millions, which was divided into twenty thousand shares. The subscriptions for stock amounted in one day to seven hundred and fifty thousand dollars, and then the Charleston parties, who held one-half interest in the whole, called the sale off, deciding to keep the lots for further speculation. To quote the old county records: "The object of this company is to acquire lands either by subscription to its capital stock, by purchase, or otherwise; to build a town to be called Bessemer, and lay off property for that purpose; to lay out parks and to build industrial establishments and residences."

Plans were outlined by DeBardeleben and Roberts for stupendous operations, comprising further railroad construction; the opening of coal and ore mines and limestone quarries, "such as would throw in the shade any other operations so far done in Alabama"; the building of a mammoth brood of furnaces, rolling mills, pipe works, every manufacturing concern that could employ coal and iron, besides the establishment of many other sorts and kinds of industries; real estate companies, and, in fine, another city such as might overtop Birmingham itself, throw Caldwell out, and make every Elyton Land Company project "look like small potatoes." For, as may be surmised, there was by this time a lively feud between DeBardeleben and the other operators of the Birmingham District.

"I was the eagle," Chief DeBardeleben has cried, "and I wanted to eat all the craw-fish I could, — swallow up all the little fellows, and I did it!" Among the enterprises now begun were the Bessemer rolling mills, the water works, and the dummy railroad into Birmingham. DeBardeleben ran down to New Orleans and through Major Burke got possession of what was left of all the cotton exposition buildings. He transported the whole layout to Bessemer, and the first group of Bessemer mills and shops was made up of a curious mixture. The Jamaica building became a portion of the rolling mills, while the Montezuma building served as the town hotel. DeBardeleben visited Charleston, St. Louis, Nashville, Memphis, and Louisville, and came back each time with a package of new fireworks to boom along his town of Bessemer. In conjunction with Pelzer and Rogers, the Charleston cotton firm, he incorporated the Bessemer Steel Company, but did not make steel. Later, he organized

the Little Belle Furnace Company. Meanwhile David Roberts managed the DeBardeleben Coal and Iron Company and handled all the detail work.

Finding they needed more ore, DeBardeleben cast his eyes again upon the Oxmoor or Eureka furnace properties, which he had once owned. This company had been struggling along under the control of the Cincinnati and Louisville factions since Colonel Sloss' resignation, and Thomas A. Mack was serving as manager of the company. M. H. Smith took a hand in helping DeBardeleben get majority stock, and in short order forty thousand more acres of mineral properties were added to the DeBardeleben holdings, together with the historic Oxmoor furnaces. The Mineral Railroad was extended by Mr. Smith to Champion, Blue Creek, and Blocton. DeBardeleben now had transportation facilities and one hundred and fifty thousand acres of mineral properties — more coal and iron ore than had any other concern in the South during that decade. Every part and parcel of these properties is owned and operated to-day by the Tennessee Company.

Among the men closely associated with Colonel DeBardeleben at this period was William P. Pinckard. In the operation of the DeBardeleben Company there were, in addition to David Roberts and the London and Charleston capitalists, Major R. H. Elliott, consulting engineer and superintendent of construction; Llewellyn Johns, mining engineer; and the two expert furnacemen, John Dowling and James Shannon.

W. P. Pinckard, owner and president of the Big Sandy Iron and Steel Company of the present day, was one of the most active and enterprising of the associates of Aldrich and DeBardeleben. An Alabamian by birth, he is descended from old Virginia stock. His ancestors were early English colonists closely related to the Washington, Madison, and Monroe families. His father, Peyton Jett Pinckard, an officer in the Confederate service, was originally from Georgia, but had settled in Chambers County, Alabama, early in the eighteen-fifties. It was here on July 15, 1852, that William Peyton Pinckard was born. His term in the little county school was supplemented by a literary course at Old Howard College, Marion, and a term or two at the University of Virginia, where, in 1874, he took a degree in constitutional and commercial law. Returning then to Alabama, he "hoisted his own flag," as he expresses it, at Opelika, and

shortly afterwards was admitted to practice in the Supreme Court of the State. He became special attorney for the Corbin Banking Company in 1882, and took up his residence in Tuskaloosa.

Of a decidedly venturesome turn, he was naturally drawn to the Birmingham District, where, in 1886, he entered the ranks of the pioneer coal and iron men. At that time, as has been connoted, the term coal and iron man implied banker, broker, real estate agent, lawyer, engineer, and trader. Not only did Mr. Pinckard become identified in various ways with the DeBardeleben Coal and Iron Company, the Bessemer Land and Improvement Company, the Bessemer and Birmingham Railroad Company, and the Bessemer Rolling Mills, but he also formed with DeBardeleben the Pinckard and DeBardeleben Company that became a pronounced factor in the early development of the real estate and mining interests of the mineral district.

"Bessemer was born in my office," Mr. Pinckard relates. His Iron City office was for some time main headquarters of "the Old Guard." Dozens of industrial projects first saw the light of day there. Pinckard was president and constructor of the old dummy line, the first railroad venture to connect Bessemer with Birmingham. Later, he branched off in the newspaper field, founded the *Birmingham Herald* Company, subsequently organized into the *Age-Herald.* To look considerably further ahead, it was William Pinckard who acquired the entire capital stock of the Pioneer Mining and Manufacturing Company in 1898, and he was instrumental in bringing about the purchase of these properties by the great Republic Iron and Steel Company. Since that time Mr. Pinckard has, like the Woodward Iron Company, "played a lone hand" in the Birmingham District. His present day operations were begun in 1899 and were based on Roupes Valley mineral properties. They were originally prospected by T. H. Aldrich. The development work here is yet in its infancy, but it is a big-shaped outline and full of possibilities.

Before entering the DeBardeleben Company Major Elliott had been acting chief engineer of the Louisville, New Orleans, and Texas Railroad, which is now a portion of the Illinois Central. Since the Civil War he had had an extended and diversified experience in his profession, having had in his charge the engineering and construction work of the Savannah and Florida, Atlantic and Gulf, the Brunswick and Albany, and the Georgia

Western railroads. His father before him, Stephen Elliott, first Episcopal bishop of Georgia, had taken a hand in projecting the first steam railroad lines connecting the Southern seaboard cities with the West. For generations members of the Elliott family have stood at the front in Southern affairs. Major Elliott's mother was Miss Charlotte Barnwell of the Charleston Barnwells. Born in old Buford County, South Carolina, in 1846, R. H. Elliott was educated at the Chatham Academy of Savannah. During the Civil War he saw field service for the Confederacy, being attached to the Seventh Cavalry, and later to the Signal Corps. After a term at the Virginia Military Institute, from 1865 to 1867, he entered upon his career as an engineer. While attached to the DeBardeleben Coal and Iron Company, Major Elliott opened up the Blue Creek mines and began construction work on the Bessemer furnaces. Later, in 1887, he accepted the place of chief engineer with the Kansas City, Memphis, and Birmingham Railroad, and then with the Kansas City, Fort Scott and Memphis Railroad. Since 1890 his headquarters as consulting engineer have been in Birmingham.

Llewellyn Johns did not enter the service of the DeBardeleben Company until after his resignation from the Pratt Coal and Iron Company, which was shortly after it was acquired by the Tennessee Company. He was appointed general superintendent and extended the operations at Blue Creek, opened Henry-Ellen and Greeley, and had under his charge by 1890 the Bessemer and Oxmoor furnaces, the coke ovens, and ore and coal mines.

John Dowling, an expert young furnaceman, entered into the Birmingham District first in the summer of 1878, coming from St. Louis, Missouri, with two other iron-men who had been sent for by Colonel Sloss to make a test of the Oxmoor furnaces and the raw materials of the Birmingham District. After a three months' stay, Mr. Dowling engaged with the Rising Fawn Iron Company of Georgia, which was under the presidency of J. C. Warner. This furnace had been making from twenty to twenty-five tons per day, and after a period of six months, increased the output to one hundred and twenty-five tons per day, under Dowling's hand. A fine grade of foundry iron was turned out here. After three years of successful service Dowling took charge of the furnaces of the Roane Iron Company, at Rockwood, Tennessee, under the presidency of H. S. Chamberlain. From

this company he stepped over to the DeBardeleben Coal and Iron Company. Here he remodeled King Henry or No. 3, at Bessemer, increasing the output to one hundred and ninety-five tons per day. This was record-breaking for that time. No. 3's output had never before that exceeded one hundred tons and its average was ninety. The first step in the distinctly modern blast furnace practice in the South was now taken. Alice furnace was eclipsed — "Little Alice," — that up to 1887 had carried off all the laurels in the Birmingham District. The attention of the Southern iron making world now centered on the Bessemer group. These furnaces became celebrated in the district by the names of King David and Queen Anne, called after David Roberts' children, David, Jr., and "little Miss Anne"; and King Henry or No. 3, after DeBardeleben and King John or No. 4, after Llewellyn Johns. Mr. Dowling is at the present time in charge of the construction of the Woodstock Company's new plants.

DeBardeleben eventually united all his scattered properties under the one company, DeBardeleben Coal and Iron Company. This company was then reorganized and put on a basis of thirteen million dollars, three millions of which was in bonds. These figures kindled the country like live wires. "And every sheaf in the field," said DeBardeleben, humorously, "rose up and bowed to my sheaf!"

A general survey of the mineral district at the time of the launching of this great DeBardeleben Coal and Iron Company (1886–87) shows thirty-three coal and iron companies, a few of which are in existence to-day. First there was Enoch Ensley leading with his $1,500,000 Pratt Coal and Iron Company, which, as has been noted, comprehended the Pratt Coal and Coke Company, the Alice Furnace Company, and the Linn Iron Works. Truman H. Aldrich's Cahaba Coal Mining Company followed as a close second. Then came the Woodward Iron Company, capitalized at $1,000,000. Then in successive order, the Eureka or Oxmoor Furnace Company, capitalized at $830,000; the Sloss Furnace Company, and the Brierfield Coal and Iron Company, each capitalized at $750,000; the Woodstock and Shelby Iron Companies, $600,000 each; the Coalburg Coal and Coke Company, $500,000; Henry-Ellen coal mines, $450,000; the Birmingham rolling mills and Mary Pratt Furnace Company at $300,000 each; the Tecumseh Iron Company, the Milner Coal and Railroad Company, and the Virginia and Ala-

bama Mining and Manufacturing Company, representing each $200,000; the Coosa, $125,000; the Montevallo Coal Mining Company, the Williamson Furnace Company, and Pierce Warrior Mining Company, each $120,000; the Anniston Car Wheel and Axle Works, Helena Coal Company, Watts Coal and Coke Company, and Morris Mining Company, each of the four capitalized at $100,000; the Birmingham Iron Works, the Bibb Branch Coal and Coke Company, and the Mabel Mining Company, at $50,000 each; and so on down to the six remaining minor concerns of 1886; the Jefferson foundry, the Iron Bridge Manufacturing Company, Aiken and Lightons foundries, Beggs stove factory, Boland's foundry, and the Birmingham Chain Works, representing all the way from $30,000 down to $10,000.

Among the realty companies that were early established by DeBardeleben and his associates, four of the most important were the Bessemer Land and Improvement Company, the Birmingham-Ensley Land and Improvement Company (following Enoch Ensley's boom town scheme, which will be noted later), the College Hill Land Company, and the East End Land Company.

Besides DeBardeleben, the Birmingham-Ensley Land and Improvement Company comprised in its list of officers R. H. Pearson, W. P. Pinckard, J. W. Sloss, J. W. Tomlinson, Robert Warnock, J. H. Slaton, J. W. Reed, and Andrew Adger. Its object was as follows:

"To carry on general manufacturing and industrial business, to buy, sell, hold lands, and improve same, laying them off into lots, streets, parks, race-track, lakes; to quarry limestone and prepare same for market; to manufacture pig iron steel, and all other articles which can be made with coal or coke and iron ore, or from wood, iron, or steel alone, or in conjunction with any other material; to erect buildings, dwellings, stores, and shops, and all machinery to accomplish the ends sought; to build and operate tramways, railroads, and to construct water works."

College Hill Land Company, which was organized December 7, 1886, with W. P. Pinckard as president, purposed merely to acquire lands. Its additional officers were A. M. Adger, W. H. Johnston, M. E. Lopez, and Augustine Smythe. Mr. Pinckard's name again appears in the East End Land Company, together with names of T. H. Aldrich and A. M. Adger.

The pioneer coal and iron men were the incorporators of the first banks as well as of the realty companies of the mineral dis-

trict. After old "Linn's Folly" comes the Berney National Bank. Among its first stockholders were DeBardeleben, Enoch Ensley, T. T. Hillman, W. T. Underwood, and John H. Inman. Of the Central Bank, among its incorporators with William Berney and Robert Jemison, Sr., were T. H. Aldrich; of the Jefferson County Savings Bank, Christian F. Enslen and his sons, Engene and Charles Enslen; of the Alabama National Bank, Joseph F. Johnston, J. T. Hardie, E. W. Rucker, J. W. Sloss, and J. W. Johnston.

An event of more or less bearing in a commercial way at this period was the formation of the house of Milner and Kettig. In the decade preceding, Major Willis Milner established the pioneer general supply and machinery business of the district. In 1886 he took into partnership William H. Kettig. Young Kettig, then about twenty-two years old, was a thorough worker with a dash of enterprise about him. He is of German parentage, but a native of Louisville, Kentucky. After a brief term at the public schools there, he started life as a shipping clerk on one dollar per week. He specialized at length in the hardware and supply business, and learned the details of the trade. As an employee of the largest firm of its kind in the West, Mr. Kettig had headquarters at St. Louis and built up a big trade, especially throughout the South.

The new firm, Milner and Kettig, assumed a considerable degree of importance to the trade in Birmingham. Gathering a big stock on hand, it supplied the demand for machinery for mills, mines, furnaces, and engines, and also manufactured power plant material and supplies for gas works, water works, plumbers, gas and steam fitters, and piping equipments for power plants. Being the first of its sort on the ground, it was a necessary adjunct to the work of making a town like Birmingham. It became absorbed in 1904 by the long-established and world-known firm of Crane Company, and the branch at Birmingham is now one of its twenty-two branches, and is still under the management of William H. Kettig.

A list of the other companies incorporated in 1886 and 1887 includes the following: The Watts Coal and Iron Company, J. F. B. Jackson, Norman W. Smith, Eugene Morehead, A. W. Graham; the Alabama Asphalt Mining and Land Company, Chas. L. Handy, C. M. Erwin, D. T. Marable, H. L. Watlington; Three Rivers Coal and Iron Company, M. L. Hershey, G. W.

Ellis; First National Coal and Iron Land Company, F. W. Miles, F. B. Clements; Peacock Coal, Iron, and Improvement Company, B. A. Thompson, J. C. Kyle, P. H. Moore; Central Trust Company, E. W. Rucker, H. M. Caldwell, J. W. Johnston, Jos. F. Johnston, T. B. Lyons; Birmingham Real Estate and Investment Company, B. F. Roden, W. H. Morris, J. F. B. Jackson, J. H. Bankhead, W. D. McCurdy, J. W. Moore; the Southern Bridge Company, W. J. Cameron, E. W. Linn; Birmingham Iron Works, J. T. Hardie, Wm. Hardie; Birmingham Bridge and Bolt Works, C. W. Wood; Smith Sons Gin and Machine Company, A. W. Smith, J. W. Sloss, D. L. Smith, Enoch Ensley; Southern Foundry and Manufacturing Company, Wm. Veitch, George Veitch, Jacob Schmidt, W. Barclay; Birmingham Chain Works, B. F. Roden, Oliver Weiser; Birmingham Axe and Tool Company, J. D. Moore, W. A. Handley, B. F. Moore, C. L. Jeffords; Birmingham Machine and Foundry Company, R. W. Boland; Red Mountain Mining and Manufacturing Company, J. T. Milner, Geo. McLaughlin; Avondale Land Company, J. W. Johnston (president of the Georgia Pacific Railroad) and A. B. Johnston; North Highlands Company and North Birmingham Building Association, John W. Johnston; Clifton Land Company, B. F. Roden; the East End Land and Improvement Company, R. H. Pearson, T. B. Lyons, Geo. L. Morris, J. V. Richards, J. W. Johnston, and the insurance firm of Louis V. Clark and Company.

Thus as the list shows, 1886–87 was the birth year of a number of important business enterprises which are still operating at the present day in Birmingham. These early companies, together with the Elyton Land Company, laid the foundation for much of the development work of modern Birmingham.

Moreover, this was the period of the formation of the Sloss Iron and Steel Company, and of the Alabama rolling mills; and it marked, furthermore, the initial operations of the Pioneer Mining and Manufacturing Company, and the incoming of the Tennessee Coal, Iron, and Railroad Company, now a subsidiary company of the United States Steel Corporation. These important companies will presently be considered in detail.

Every sort and kind of manufacturing and mercantile concern, realty company, and coal and iron enterprise started up in DeBardeleben's wake. Every concern was whipped up to greater speed by the DeBardeleben Coal and Iron Company which now led all the rest. Announcement of the birth of the city of Bessemer sounded, in the iron-master's words, like very bugle call. The Birmingham District began, indeed, to move.

When DeBardeleben gets full into the swing of speech he talks like the early Indian chiefs, his utterances often alive with fantastic figures drawn out of the lights and shadows of the wild pine woods that were his home. "Break a young mustang into a fox-trotting gait, — that's what we did to the Birmingham District," he has said: "There's nothing like taking a wild piece of land, all rock and woods, ground not fit to feed a goat on, and turning it into a settlement of men and women, making pay rolls, bringing the railroads in, and starting things going. There's nothing like boring a hillside through and turning over a mountain. That's what money does, and that's what money's for. I like to use money as I use a horse, — to ride!" The times were needing a leader and he felt that the leader was he. All his strokes now were bold ones and lucky. "Life," said he, "is one big game of poker!" And in it he was surely a heavy gambler!

"He has a way about him," says Llewellyn Johns, "that takes! He's a regular play-actor when you get him started, and I can't tell why I like him, but I do!"

"Ah, DeBardeleben!" once exclaimed his good friend, M. H. Smith, "he is the darndest man I ever knew in my life! Why, I've spent thirty millions following that man!"

Colonel Shook tells how DeBardeleben once set fire to a crowd exclaiming in that way he has: "I know a coal mine, gentlemen, in the Birmingham District, where nature herself has driven the main entry for clean a hundred miles!" They invested on the spot. Indeed, for that magic he had in painting Birmingham, surely he got it from somewhere back of the moon. Perhaps it was voice in him of his Hessian forbears, that faraway Teutonic dream stuff that bred the Nibelungen Lied. Had this soaring imagination but been fed by poet springs, and not wandered in such alien and unbridled ways, there is no telling what gains had been Alabama's. Indeed, for extraordinary vitality and physical energy, one recalls in the history of men but one instance somewhat similar, that of Benvenuto Cellini. As Cellini upon the casting of his Perseus — so, DeBardeleben, upon the casting of the Birmingham District. Now did he stride along triumphant, and he played him a jolly tune, the name whereof was "The Great Boom of Birmingham."

Those who heard it, and lived through it, say that in the history of all the cities of the South there was nothing like to this.

"The boom in San Antonio was nothing to it," says an old citizen. "Nowhere in the world did things happen as they happened in Birmingham in '86 and '87. Why, men would come in at four o'clock in the morning and begin making trades before breakfast. Property changed hands as much as four and five times a day. Everybody, everywhere, was talking Birmingham. Men went crazy two hours after getting here; they certainly did."

As has been seen, there were dozens of real estate concerns in action, and now dozens more sprang up. Each tried to outboom the other, and DeBardeleben outboomed them all. "Little Birminghams" started out of the mineral region everywhere like mushrooms. A brand-new sensation was born every day. More blast furnaces, iron works, coal and iron mines than could ever see the light of day in fifty years were projected. The intelligence of even the most conservative business men became utterly sunk in sensations. "All young and lusty cities must go through just such a delirium," the *New York Sun* has declared, "before they get their poise and the saving place of their matured senses."

As for the stock of the Elyton Land Company, it went up like the flare of Aladdin's lamp, and poured gold into the hands of the early owners of the Jones Valley lands. "The history of the Elyton Land Company is the fairy tale of Birmingham," says Colonel Shook. In Caldwell's record of this company in 1886 we find the following:

"Such a scene of excitement in real estate speculation as was presented in Birmingham at this time was perhaps never before witnessed in the South. People from all parts of the South flocked to Birmingham, attracted by the reports which had spread all over the country of the wonderful profits being so rapidly realized here by speculation in real estate. Hotels and boarding houses were packed to overflowing by eager fortune hunters. Almost every prominent window facing on the business streets was rented at fabulous prices for real estate offices, while glib-tongued speculators never tired of pouring into listening ears fabulous stories of the enormous profits being so rapidly realized by lucky investors.

"Day by day the excitement grew. Upon street corners, in hotel corridors, and in private parlors, the one theme of conversation was real estate speculation; young and old, male and female, merchant and clerk, minister and layman — everybody seemed seized with a desire to speculate in town lots. Conservative citizens who in the early stages wisely shook their heads and

predicted disaster to purchasers of property, as prices climbed higher and still higher, with scarcely a single exception, ceased to bear the market, and when prices had advanced two or three hundred per cent above what they had thought to be extravagant, entered the market, bought property, and joined the great army of boomers. Wilder and wilder the excitement grew. Stranger and resident alike plunged into the market, hoping to gather in a portion of the golden shower which was now falling in glistening sheets upon the Magic City. Each day the office of the Elyton Land Company was crowded with a throng of eager purchasers, and the president of the company, who alone had charge of the sales of the company, was kept busy at the maps from morning until night, pricing property and making sales. A memorandum of each sale as soon as made was handed over to a clerk, who would receive the cash payment and give a receipt for the same. In many instances the purchaser would seize his receipt and rush out on the street and resell the property at a handsome profit before his bond for title could be executed.

"One instance may be mentioned where a real estate speculator bought of the Elyton Land Company a large amount of property, and in less than three months sold the same at four hundred per cent advance. On several occasions during this year the president of the company stopped sales, and more than one time left the city, but in a few days he would be overwhelmed with telegrams urging him to return. Many strangers who came to Birmingham during this period did not reach the Elyton Land Company at all, but bought property from speculators at prices far beyond what they could have bought property for from the company in the same locality.

"During this phenomenal period of excitement all sorts of corporations were formed and an endless variety of financial schemes were floated. A syndicate would be formed, a tract of land purchased, a land company organized, the land being subscribed for at an immense advance above the purchase price, and the stock put upon the market, to be eagerly taken by a confiding public, with scarcely a question as to the amount of capitalization. Any number of schemes for building suburban towns contiguous to Birmingham were organized, and land five and ten miles from the city, which had never before been considered worth above $10 or $12 per acre, was within a few months valued at from $500 to $1,000. Land owners in town and country would, by computing their possessions at the public estimate, easily figure themselves rich."

Jefferson County was now lifted from its rank as the pauper county of the State. According to J. W. Du Bose, the county had up to this time drawn more funds from the State treasury than it had ever contributed. It became an important taxpayer

from this date on. All the new business, little and big, when added to that already on the ground, brought up the sum total to a startling figure. Impetus was given to the Sheffield and Anniston districts; the Birmingham District itself, which to the outside world frequently spells the whole Alabama mineral region, was now lifted up to the whole wide world. It was heralded far and abroad as a creature — Pallas-born — wonderful. Events, indeed, were lifted bodily and carried up to the hilltop by a few strong men, — all too few to bring about the accomplishment of the vast and magnificent development they saw spread in far, fine lines in the valleys.

"Those men of the Old Guard," said William Pinckard, "they were of big calibre. They had force, character, invention, and they had courage and brains. They were true pioneers. And it takes the pioneer to dare. He 'll bet his last dollar on conviction. There 'd be no development, no construction, anywhere, if somebody did n't take the risk in the beginning, and if everybody waited to be cocksure of his money. The work that Aldrich and DeBardeleben did has left a lasting impress on the country. Those two men deserve the respect and the gratitude of all the generations to come. For all will be the beneficiaries in one way or another of these two great captains of the Old Guard."

CHAPTER XXII

MORE BIG BUSINESS 1886. RECORDS OF SLOSS IRON AND STEEL COMPANY AND PIONEER MINING AND MANUFACTURING COMPANY

Option on property of Sloss Furnace Company secured by John W. Johnston and Joseph Forney Johnston. John C. Maben raises three millions on Wall Street in one day. Option taken up. Colonel Sloss retires. Brief résumé of his achievements. Organization of Sloss Iron and Steel Company. J. F. Johnston elected first president. Sketch of the senator. He resigns from coal and iron business to go into politics. Thomas Seddon elected president of Sloss Company. Biographical sketch of Mr. Seddon. "The company spent five hundred thousand dollars educating me!" How young James W. McQueen stepped into the ranks of the Sloss Company. Export trade to foreign countries inaugurated. Sol Haas succeeds to presidency. Acquisition of Sheffield properties. Affairs of Pioneer Mining and Manufacturing Company. Interest of Samuel Thomas. Old Hawkins plantation. Building of first furnace. Entrance of F. B. Keiser. Founding of Thomas. Odd geological construction on pioneer property. John H. Adams appointed superintendent of mines. Biographical sketch of Mr. Adams. Purchase of company's properties by Republic Iron and Steel Company in 1899. Rolling mills acquired. W. H. Hassinger elected vice-president and district manager. J. H. Adams resigns to captain Sayre Mining and Manufacturing Company. W. H. Hassinger enters Southern Steel Company. Report of President Thompson, 1901. Present Day Management. Entrance of W. A. Green.

TWO important contemporary events of the days of the Great Boom of Birmingham were the formation of the Sloss Iron and Steel Company, now the Sloss-Sheffield Steel and Iron Company, and the inauguration of construction work by the Pioneer Mining and Manufacturing Company, now a division of the great Republic Iron and Steel Company.

The organization of the Sloss Iron and Steel Company came about in this way. Colonel Sloss was nearing his seventieth year and the strain of incessant toil began to tell on him. He gave an option on the Sloss Furnace Company late in the fall of 1886 to John W. Johnston, president of the Georgia Pacific Railroad Company, and to Joseph Forney Johnston, then president of the

Alabama National Bank. Owing to the fact that J. C. Maben was connected with the building of the Georgia Pacific Railroad as a director, and in much of its financiering, the Messrs. Johnston started for New York City to see Mr. Maben and try to raise the purchase money to take up the option. Their meeting led to immediate results. Although Mr. Maben had not then made a personal inspection of the Birmingham District, he was fairly at home on the ground; he was informed as to the general conditions and possibilities of the region, and foresaw the vast proportions to which coal, iron, and railroad enterprises in Alabama would reach in time, if properly financed and directed. Thus, sighting an opportunity, he at once mustered his forces of credit and influence on Wall Street, and, single-handed, went about raising the capital required. In one day he raised funds to the amount of three millions of dollars. The option on the Sloss Furnace Company was straightway taken up; Colonel Sloss retired from active business life. He bought a home on Highland Avenue, which is the one now owned by J. H. Woodward, president of the Woodward Iron Company. During the few remaining years of his life, Colonel Sloss became actively interested in the educational progress of the South, and at the time of his death, in May of 1890, he was president of the Lake DeFuniak Chatauqua Association.

James W. Sloss left upon the Birmingham District his mark. Every work to which he turned his hand has become permanent, examples being the South and North Railroad, now part of the Louisville and Nashville system; the Oxmoor furnaces and the Pratt Coal mines, now Tennessee Company holdings; and the Sloss Ore mines and the Sloss Furnace Company, foundations of Sloss-Sheffield Steel and Iron Company. Colonel Sloss' career has been followed in these chronicles straight from the time he trudged the rough pikes of Limestone County without a penny in his pocket (but carrying "Harry Lorrequer," his pet book), through a long upward struggle to a place of influence and regard in the community. His name, retained in that of the Sloss-Sheffield Steel and Iron Company, carries with it historic suggestion and sense of the pioneer days of Alabama.

In February of 1887, following the purchase of the Sloss Furnace Company by the New York capitalists, the new company, Sloss Iron and Steel, was formed, and Joseph F. Johnston was elected president.

At this time Mr. Johnston had been in Birmingham but a couple of years, having come up from Selma, where he had practiced law ever since the Civil War closed, and where he had taken more or less of a hand in State politics. Like so many of his colleagues in the coal and iron business of Alabama, Mr. Johnston had served in the Confederate army. He had risen from the ranks to the office of captain, and he was so frequently at the front as to be shot down four times. Being just twenty-one, however, at the Appomattox business, he got rather more comfort than misery out of his battle wounds, and in every biography since recorded of Senator Johnston, no matter of how brief a compass, those four Federal bullets have due mention. Captain Johnston was not by birth an Alabamian, for he came from North Carolina, and was of old Scotch fighting stock. The first Johnston on North American soil back in 1745 was one Gilbert Johnston of Scotland, who, espousing the cause of the Pretender, fought and was wounded at the battle of Culloden. Then with the clan of the McDonalds he had fled for refuge to North Carolina. Gilbert Johnston's son, named for King James, became a colonel in the war of the American Revolution. He was the grandfather of Joseph Forney Johnston, who was born there at the old colony place in Lincoln County, North Carolina, in 1843. He left school to shoulder his musket and fight as his fathers had fought. Taking up the study of law in 1865, he was admitted to the bar, and left North Carolina for Alabama. In 1884 he came to Birmingham and, as has been noted, went into the banking business.

When he entered upon his administration of the Sloss Company he at once set about building two additional blast furnaces at North Birmingham. With the backing of the Virginia and New York capitalists, he acquired 15,000 additional acres of coal lands. He purchased outright the Coalburg Coal and Coke Company, founded by John T. Milner, and further developed by Edward M. Tutwiler. Additional coke ovens were also built to supply the two new furnaces which were building, and additional coal mines were opened to supply the ovens with coal, and also to take the place of coal which had been furnished the old company for its two city furnaces by the Tennessee Coal and Iron Company under a contract which still had two years to run. With 38,000 acres all told in the shape of coal, iron, and limestone lands, with an annual output of 65,000 tons of iron,

and the capital stock placed at $3,000,000, the Sloss Iron and Steel Company was ready for a start. But it was handicapped with a heavy mortgage placed for the purpose of extension and improvement.

The furnaces and mining operations ate up every dollar of the company's earnings, and looked none the fatter for it. The company began to struggle to meet its interest, but soon saw, instead of happy prospect of clear mortgage and big dividends, the forlorn visage of bankruptcy staring them in the face. Captain Johnston had a dream of seven lean kine. Then, too, the captain was ever more of a legislator (Southern Democrat) than he was a coal and iron man or a financier. Other lights beckoned, and he quit after his first year's service to go into the political field. He became chairman of the State Democratic committee; then, in 1896, governor of Alabama, and in 1906, United States senator from Alabama, succeeding Edmund W. Pettus at his death.

Meanwhile in the year 1888 the Sloss Company was facing a crisis. It was on the verge of bankruptcy. Thomas Seddon became interested at this juncture on the plea of the stockholders and directors. Mr. Seddon, representing interests and capital both in Richmond and Baltimore, had been in 1886 and 1887 officially connected with the Richmond and West Point and Georgia Pacific railroads, the latter road being the forerunner of the Southern system. In the construction of the various branch lines of the Georgia Pacific, various properties of the Sloss Company had been brought constantly to the survey of the railroad men interested, and also to the attention of John C. Maben's Wall Street firm. The purchase of the option on this property by Mr. Maben in 1886 concerned his business associates in every quarter.

After Joseph F. Johnston's retirement in the year 1888, Thomas O. Seddon was called to the presidency of the Sloss Company, "by virtue," Richard H. Edmonds declared, "of his ability as a business man, at a time when he scarcely knew a piece of pig iron from a lump of coal. . . . Seddon brought to his task keen financial ability and a determination to save from ruin an enterprise in which so many of his friends were largely interested. He bore the brunt of the reorganization of the company and its recapitalization, and lived to see it on a firm and solid basis, with every dollar of investment safe and yielding

a large profit to those whose faith in him had called him to so difficult a task."

For eight years Mr. Seddon worked for the Sloss Company as its president and manager, and he died in harness. "They never could afford to turn me off, you know, no matter how much they might want to," he used to say with a twinkle in his eyes. "It would've been too big a loss for 'em to stand. For the company spent $500,000 educating me! No, sir, no danger of my losing my job."

"Tom" Seddon was a Virginian, born and bred on James River. His father, a leading figure of the times, was the Secretary of War of the Confederacy. Young Seddon went to work early in the commercial field, starting in the wholesale grocery business in Richmond, and later turning to railroad enterprises. Short of stature, he was slight and fragile in physique, for he had spinal disease to battle against from birth. "There was always considerable more quality about Tom Seddon than quantity," said Colonel Shook. "He was big-hearted, big-brained, broad-gauged, and full of humor."

"He liked a joke," says Truman Aldrich, "a good deal better than most men do, and he usually saw more in one. I remember an old darkey janitor who used to work around the office, and once after a directors' meeting, when he was putting the office to rights, he said to Mr. Seddon, 'Dem correctors o' your 'n sho' do set long, Marse Tom! Seddon fairly grabbed the epithet correctors! For the rest of his life he never referred to the directors of the Sloss Company as other than his 'correctors.'"

One day in 1890 Tom Seddon was walking down Twentieth Street in Birmingham when he met a young fellow, whose folk he knew pretty well, and who had recently come up to Birmingham as train dispatcher for the Alabama Great Southern.

"James," he said, "what'r ye getting?"

The young man told him.

"Well, now," Seddon said, "come along up to the office. S'posin' you start in with us?"

The young man was James William McQueen, later to become vice-president of the Sloss-Sheffield Company, and one of the big guns of the Birmingham District.

During Seddon's administration (on March 3, 1894) export trade of pig iron to foreign countries was inaugurated in Jefferson County by the Sloss Iron and Steel Company. A consign-

ment of 100 tons, or 224,000 pounds, on a through rate of $2.25 per ton, was billed from Birmingham to New Orleans over the Louisville and Nashville and shipped to Liverpool. Sloss foundry iron was also in demand from the various navy yards of the United States. An observation by Herbert Casson in "The Romance of Steel" is, "Admiral Melville jocularly explained the memorable run of the warship *Oregon* by saying, 'You know she was built of Sloss iron.'"

The death of Thomas Seddon took place on May 10, 1896, during his term of office as president of the company. Mr. Seddon was also serving at the time as president of the Alabama Industrial and Scientific Society, of which he was one of the original members. He had, in fact, signed the call for the first meeting of this society held in December of 1890, and he was one of the sincere and active workers of the little group of progressive and scholarly men banded together in the common interests of coal and iron development of the State. Dr. William B. Phillips, Erskine Ramsay, and Dr. Eugene A. Smith comprised the committee appointed to draw up resolutions at Seddon's death, placing in the records of the society a tribute to his work in the Birmingham District, and to his co-operation with the well directed efforts in behalf of the society. Tom Seddon's brother, William C. Seddon, for many years a banker in Baltimore, was elected early in 1909 chairman of the executive and finance committee of the Alabama Consolidated Coal and Iron Company.

Upon the death of Thomas Seddon, Sol Haas succeeded to the presidency of the Sloss Iron and Steel Company; and it was during Mr. Haas' administration in 1899 that the directors of the company acquired, through purchase, the two furnaces erected by Colonel Ensley at Sheffield; the Lady and Hattie Ensley and the "Philadelphia Furnace" at Florence; 20,000 acres of brown ore lands in Franklin and Colbert counties; and a large coal mine with its washer, coke ovens, and accessories, at Dora on the Frisco Road, originally owned by Walter Moore. The furnaces had not been operated for a long time, and nearly all of the Sheffield district property thus acquired had been in the hands of a receiver for nine or ten years. The Franklin County ore lands, situated in the neighborhood of Russellville, originally belonged to Andrew Jackson's scout, Major Russell, and were near to old "Cedar Creek," the first furnace of Alabama. Twenty thousand additional acres of coal land in Walker

County were also purchased, and the name of the company was changed to that of the Sloss-Sheffield Steel and Iron Company. Its record from 1899 to 1909 will be treated in a later chapter.

The Pioneer Mining and Manufacturing Company was organized by members of the famous Thomas family of Pennsylvania iron-masters, — David, Samuel, and Edwin Thomas, — together with Robert H. Sayre and their associates. The first seeds were sown directly after the Civil War, when, as has previously been chronicled, the initial properties of the company were acquired and Baylis Grace and Giles Edwards were employed as purchasing agents and prospectors. The acquisition of additional mineral lands at the hands of various other parties went on gradually for two decades before any material shoot of the Pioneer Company in the shape of a furnace stack pushed its head above ground.

Samuel Thomas, whose history is widely known, kept close tab on his properties in his frequent visits to Alabama, but did not consider that the general conditions of the South warranted their development until the boom times of Birmingham in 1887. The old Hawkins plantation on which the town of Thomas was founded was purchased through Aldrich and DeBardeleben for four dollars an acre. Mr. Thomas' company held lands in Bibb, Shelby, Tuskaloosa, and St. Clair counties, besides in Jefferson, much of which was secured at one dollar per acre. Their brown ore properties in Tuskaloosa included the historic Tannehill mines and hundreds of acres in and around the old furnace ruins.

John H. Adams, vice-president and general manager of the Sayre Mining and Manufacturing Company, writes:

"The first furnace of the Pioneer Company was built on the old Williamson Hawkins plantation, and the town of Thomas was laid out with its brick houses, its churches, schools, and spring water supply, much after the plan of the town of Hokendauqua, Pennsylvania. All of Samuel Thomas' long-cherished desires were carried out under the management of his son, Edwin Thomas, president, vice-president, and general manager. Mines, iron ore, and coal for the supply of the company furnaces were opened by him. It is interesting to note in this connection that one of the brown ore properties selected by Mr. Thomas, a piece of property which was looked upon as being of little value, has mined from a comparatively few acres and shipped to the furnace at Thomas over two million tons of iron ore."

Associated with Mr. Thomas in the building of this town and his iron manufacturing plant was F. B. Keiser, one of the former engineers of the Thomas Iron Company at Hokendauqua, Pennsylvania. Mr. Keiser's father, Bernhard Keiser, an early German engineer in this country, a foundryman, machinist, and inventor, was, at this time (early in 1887), chief engineer for the Thomas Iron Company. F. B. Keiser was born in 1858, at Allentown, Pennsylvania. He received his early education in the public schools at Hokendauqua, and later took a special course in Allentown.

He was instructed in mechanical and civil engineering by his father and subsequently became his assistant. When he left Pennsylvania for the South in February, 1887, he had in charge the mechanical and construction departments for twelve blast furnaces, machine, car, and boiler shops, foundries, rolling stock, and mines belonging to the Thomas Iron Company. He had spent some time in the Connellsville region, studying the manufacture of coke and the construction of coke ovens. He made the plans for the general layout of the first two furnaces which were built at Thomas, Alabama. The company's first furnace went in blast May 18, 1888; the second, also designed and built by Mr. Keiser, was completed in 1890. The third furnace, put up after the Republic Iron and Steel Company acquired the Pioneer Company, was erected under Keiser's supervision.

The town of Thomas is located on a tract of one thousand six hundred eight acres, four miles from Birmingham, near Pratt City. Village Creek runs through the property, supplying the furnaces with water and feeding an artificial lake for storage purposes and for protection against drought. West Red Mountain crosses Thomas tract on its northern portion and gives out at the little bridge on the old Jasper road.

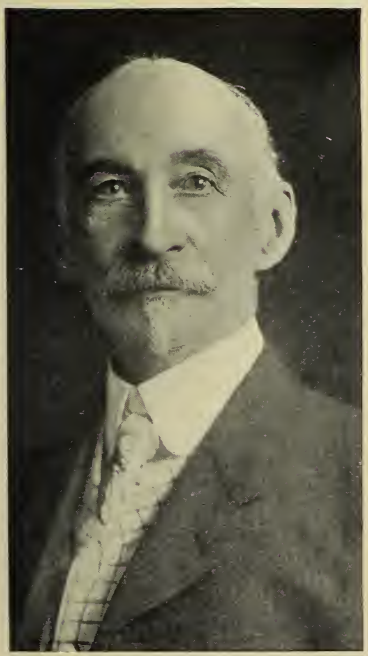
"A curious fact is that this vein of ore is just one hundred and fifty yards from the Black Creek Coal Seam," says Mr. Adams. Certainly a closer contiguity than exists in any other portion of the State. Within a few yards of this odd geological construction, on the Thomas property, stand to-day two of the original plantation cabins built long before the Civil War by old Williamson Hawkins. They are still occupied by two of old "Marse" Hawkins' former slaves, Aunt Chloe and Uncle Nat. "Dese yere misable furnaces, an' de slag piles an' de pig iron done ruined my watermillyun patch!" says Uncle Nat. The

LLEWELLYN JOHNS

A Pioneer Mining Engineer of Birmingham District

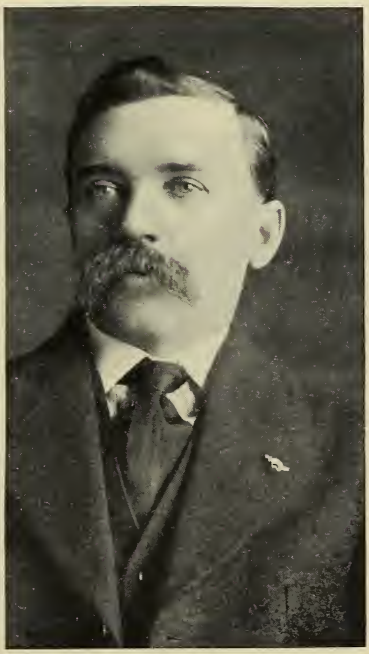
F. B. KEISER

Vice-President and General Manager of Southern Iron and Steel Company



JOHN CAMPBELL MABEN

President of Sloss-Sheffield Steel and Iron Company



JOHN H. ADAMS

Vice-President and General Manager of Sayre Mining and Manufacturing Company

Thomas tract is reached and cut by all of the trunk lines entering Birmingham, as well as by the Birmingham Railway Light and Power Company's main line to Ensley, which passes one and three-fourths miles through the property. There is immediately south of and adjacent to the plant a deposit of dolomite which supplies the furnaces.

In 1892 Mr. Thomas appointed as superintendent of his mines John H. Adams, who was at that time acting as manager of mines for the Morris Mining Company. Mr. Adams, who came from Birmingham, England, as a boy, has made his own way up in this country. He was born in Birmingham, England, in July, 1856. His father was manager of the Hallfield Iron Works of Bilston. He attended the Dudley Grammar School of Birmingham and the Mechanical Institute of Staffordshire.

There were then in Staffordshire great open-throated furnaces, without bells, and the coke was burned in wide coke hearths. By these great lights John Adams used to do his lessons at night. When he was fourteen years old he set to work in the drawing-room and the mills of Caponfield at Priestfield. He had not been there many months when the chance came to go to America. It seems that John Fritz's rolling mill in Chattanooga had been blown up in the war and the remains were bought by General John T. Wilder, United States Army, and his associates. General Wilder went to England for skilled iron workers, and young Adams was one of the crew employed, and came over that very year (1870). During the ensuing ten years he worked at various plants in Cincinnati and in the Pittsburgh and Bethlehem districts of Pennsylvania. The year of his marriage, 1880, was also the year of his coming to Birmingham. His wife was a Welsh girl, the daughter of George Williams, an iron man, once connected with the old Neath Abbey Iron Works in Wales, where David Thomas had gotten his first job.

After working two years in the Birmingham rolling mills under Thomas Coleman Ward, John Adams entered the Sloss Furnace Company, and eventually became mine manager of the red ore mines of Ruffner, Irondale, and Sloss. At the time of the organization of that company's furnaces at North Birmingham, he left to take the position of manager of the Tredegar rolling mills at Chattanooga, and became at length general superintendent of the Bessemer rolling mills, and in 1890 became mine manager of the Morris Mining Company, where he had

charge of the operations at Redding, Alice, and Wade. Two years later he entered, at Samuel Thomas' instance, the service of the Pioneer Company, with which organization he remained until his resignation in 1906. In addition to his office as superintendent of mines, Mr. Adams also acted as general land agent for the Pioneer Company. He prospected, selected, and purchased large additional areas of coal, ore, and limestone properties, making monthly reports to Mr. Thomas. The brown ore mines at Goethite, near Tannehill, and at Houston, and the coal mines at Sayreton and Republic were opened and developed under John Adams' jurisdiction. The Raimund mine was named by him for Samuel Thomas' grandson.

In October of 1899 all of the properties of the Pioneer Company were purchased by the Republic Iron and Steel Company. This immense corporation, whose main headquarters are at Pittsburg, owned mineral interests in lands, furnaces, rolling mill, and steel plants, ore and coal mines in Pennsylvania, Ohio, Indiana, Illinois, and Minnesota, and at that time had a capital of forty-seven million dollars. Its entrance into the Southern field afforded another sensation in the business world. In addition to acquiring all the stock of the Pioneer Company, the Republic also bought up the old Birmingham rolling mill, the first on record in Birmingham, and the Alabama rolling mills at Gate City. The latter concern, which had been established in the great boom year, about the same time the Pioneer Company began construction work, was captained by W. H. Hassinger.

Mr. Hassinger was now elected by the Republic Company as vice-president and district manager. John H. Adams was made assistant district manager. Associated with these two officers were mining engineer Llewellyn Johns, district treasurer D. M. Forker, district auditor P. C. Rickey, superintendent of furnaces F. B. Keiser, superintendent of Birmingham rolling mills J. H. Pritchard, superintendent of Sayreton mines J. E. Strong, superintendent of Warner mines H. A. Lint, superintendent of ore mines R. Moon. Development work now progressed actively, with ample backing. No. 3 was put in blast June 11, 1902. "This was the first large furnace built in the Birmingham District," says Mr. Keiser. "Up to that time it was thought impossible to run a furnace of its size successfully. It proved a success, and other furnace men in the district soon followed the example." This furnace had a daily capacity of two hundred

"Uncle" Bob Fuller
A Tannehill Survivor

The Old Mansion House
Owned by Republic Iron and Steel Co.

Family Burial Ground of old Hawkins Estate, Jefferson County
On property of Republic Iron and Steel Company

"Roadey"
Pet Mule of Colonel DeBardeleben

fifty tons and was considered the most modernly equipped in the South in 1902.

John H. Adams resigned from the Republic Company in 1906 to become vice-president and general manager of the Sayre Mining and Manufacturing Company. It seems that Robert H. Sayre, so long associated with Samuel Thomas in the purchase of mineral properties in Alabama, and acting as one of the directors in the Pioneer Company, withdrew his connection with the company when its holdings were sold to the Republic Iron and Steel Company, but kept his own property. He began buying more coal lands and organized the Sayre Mining and Manufacturing Company in connection with Samuel Thomas. This company began operations at Sayre, Alabama, July, 1903, and John H. Adams was connected with it at the time of its formation, with the consent of the Republic officials. When its operations called for steadier application he resigned his office to captain the Sayre concern. Upon the death of Robert H. Sayre, in 1907, A. N. Cleaver became president, while Mr. Adams remains as vice-president and manager, and James Weisel as secretary and treasurer. W. H. Hassinger also resigned from the Republic Company to officer his own concerns in 1907. In 1909 he was elected president of the reorganized Southern Iron and Steel Company.

Of the older officers of the Pioneer Company remaining with the new concern until 1909 was F. B. Keiser, general superintendent of Thomas division. Many improvements and labor-saving devices and inventions of his own, as well as those of others, were introduced by Mr. Keiser, among them an oil-saving machine, also the ore gates, which are used for delivering ore from the bins into the cars.

These were first used at No. 3 furnace, and then at No. 1 and No. 2, and have proven such a success that others in the South as well as in the North have adopted them because of the saving in labor. Mr. Keiser had entire charge in an official way of the town of Thomas, acting practically as mayor and public school superintendent, as well as continuing his daily work at the plant.

Subsequent events relating to the Republic Company when John W. Gates and associates acquired controlling interest and John A. Topping entered the Southern field will be detailed later. Enough to say here that the old Pioneer Company came

to hold a place in the front rank, along with the five present-day leaders: the Tennessee Coal, Iron, and Railroad Company; Pratt Consolidated Coal Company; Sloss-Sheffield Steel and Iron Company; Woodward Iron Company; and Alabama Consolidated Coal and Iron Company.

The combined capacity of the three furnaces shortly after the Republic Company acquired the property totaled six hundred fifty tons per day. The coal properties at Warner and Sayreton were developed and an immense battery of coke ovens, said to be the largest single battery in the United States (nine hundred beehive ovens), was completed.

The president of the Republic Company, then Alexis W. Thompson, announced in December, 1901, its pig iron capacity altogether, North and South, as 600,000 tons per annum. He figured the raw materials in the ground as 50,000,000 tons coking coal, 50,000,000 tons red ore, and 20,000,000 tons brown ore. Of the company's possessions in Alabama he said:

"In Alabama the company owns seventy million tons of ore and fifty million tons of coal, mostly in fee simple, together with ample quantities of limestone, all within switching distance of three blast furnaces at Thomas, Alabama, which have a daily capacity of six hundred and fifty tons of basic, foundry, and forge pig iron. This ore, coke, and limestone will cover the requirements of double the present capacity for more than fifty years. The company produces all of its coke, ore, and limestone requirements in this district, and, with three modern blast furnaces, one entirely new, the others completely remodeled since they were required by the company, pig iron in this district will be continuously produced at the lowest possible cost.

"It may interest our stockholders to know that during the year 1901 the State of Alabama produced more pig iron than any other State of the Union, excepting only three, viz.: Pennsylvania, Ohio, and Illinois, and only two hundred and seventy-five thousand tons less than Illinois, these four States having an output of more than eighty per cent of the total production in the United States. The development of the pig iron production in the State of Alabama has been very rapid and is a very important factor in the iron and steel business of the United States."

During the present-day period the Republic Iron and Steel Company is officered by John A. Topping , chairman; Tracy W. Guthrie, president; Thomas J. Bray, vice-president; Severn P. Ker, vice-president; Harry L. Rownd, secretary and treasurer; Simpson, Thatcher, and Bartlett, general counsel. The executive

committee comprises John A. Topping, Grant B. Schley, John W. Gates, Leonard C. Hanna, Earl W. Oglebay. Each of the officers of this committee is also a director in the company. Other directors are Tracy W. Guthrie, Harry S. Black, J. B. Duke, G. Watson French, Harry L. Rownd, Edward J. Berwind, and Samuel G. Cooper.

The officer acting in immediate charge of affairs in Birmingham is William A. Green, treasurer and auditor of the Southern district. Mr. Green has had practically twenty-five years of experience in the financing and accounting end of the iron and steel business. A Virginian by birth, he began his career early in the eighteen-eighties in New York City, on Wall Street. In 1884 he located in Chicago and took a clerical position with the Joliet Steel Company. Upon the consolidation of all of the Chicago Steel interests with the Illinois Steel Company, five years later, Mr. Green was made division auditor of that company, and successively auditor of costs, assistant secretary, and secretary. In 1899 he was elected treasurer of the American Steel and Wire Company. Serving thus on the staff of John W. Gates, Mr. Green was intimately associated for years with that enterprising and successful captain of industry. When the syndicate, so frequently referred to as "the Gates Syndicate," acquired majority stock of the Tennessee and Republic companies, he was elected secretary and treasurer of the Tennessee Coal, Iron, and Railroad Company, and treasurer of the Southern district of the Republic Company, which last position he retained, resigning the former when the United States Steel acquired the Tennessee Company.

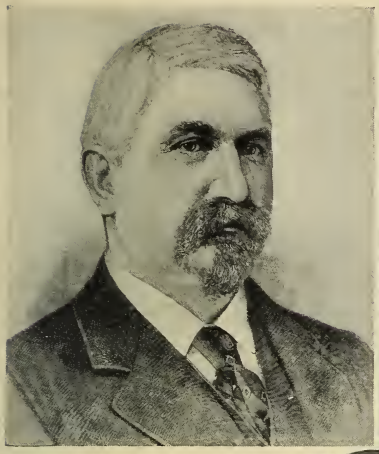
CHAPTER XXIII

ADVENT OF TENNESSEE COMPANY INTO ALABAMA (1886) AND ITS EARLY TRIALS AND TRIBULATIONS

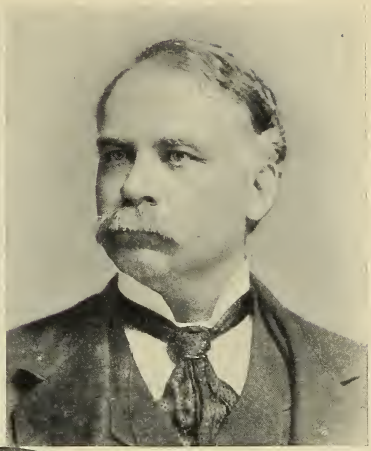
How it all came about. Feuds behind the scenes. Tennesseean *versus* Tennesseean. Pratt Coal and Iron Company conveyed to Tennessee Company. Résumé of early history of celebrated company. Its origin in Cumberland Mountains. Discovery of coal on plateau. Role played by Lawyer Bilbo of Nashville. New York capitalists invest in property. Sewanee Mining Company incorporated. Construction of railroad "up to the clouds." First coal shipped 1856. Thousands of acres of mountain land donated to University of South by Tennessee Company. New charter obtained 1860 and name changed to Tennessee Coal and Railroad Company. Act of incorporation. Amendments to charter. Hard times ahead. War breaks out. Operations during Civil War. Legal tangles of company begin. Arthur St. Clair Colyar takes hold of the business. Young Alfred M. Shook gets his first job. How the company was floated on air. Services of A. T. Duncan and J. C. Warner enlisted. Reorganization takes place. Business men of Nashville step into the field. Colonel Shook's gallant rescue of Kate. Struggles of early days. Contract to work convicts made with State of Tennessee. More trouble. Colonel Colyar predicts great days ahead. Messrs. Shook and Warner learn how to build coke ovens and blast furnaces. Construction of the Fiery Gizzard. Visit of James Bowron, Sr., to the Tennessee Mountains. Start of Southern States Coal, Iron, and Land Company, Ltd. Description of Sequatchie valley. Control of Tennessee Company passes into new hands. Sketch of William Morrow. Organization of Sewanee Furnace Company. Young George B. McCormack enters service of company. Summary of operations in early eighteen-eighties. Association of Thomas O'Connor and William H. Cherry with company. John H. Inman acquires T. C. I. stock. Enoch Ensley is left out of big deal and gets coal mine in Alabama. Nat Baxter, Jr., of Nashville appointed to official position. Trade with Southern States Coal, Iron, and Land Company effected. Interesting record of the Bowron family. Thomas Whitwell's connection. John Bull in the Southern iron business. Gradual progress of consolidated company. Tennessee Company begins to attract attention of New York Stock Exchange. Wall Street game commencers. Influence of George B. McCormack. The march to Alabama.

THE coming of the Tennessee Coal, Iron, and Railroad Company into the Birmingham District in 1886 is perhaps the most significant event in Southern coal and iron records of this interesting year. The company's leap from the Cumberland Mountains into the Alabama field had origin in certain differences in matters of policy that occurred between Enoch Ensley and T. T. Hillman, and also between A. M. Shook and W. M. Duncan.

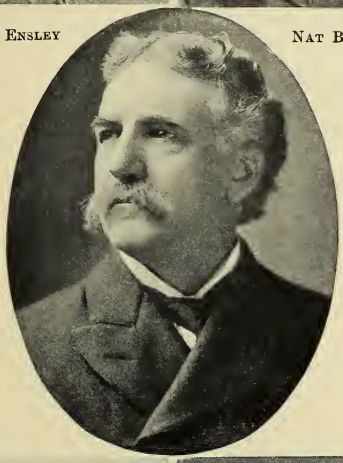
Former Captains of the T. C. I.

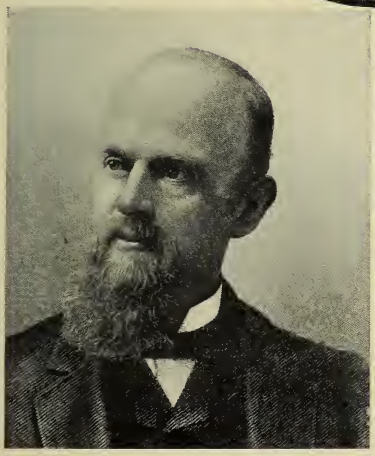


Colonel Enoch Ensley

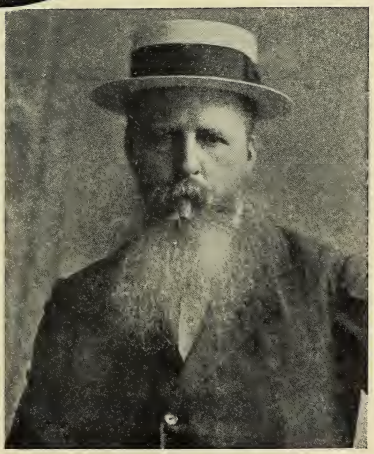


Nat Baxter, Jr.





T. T. Hillman



Colonel Alfred Montgomery Shook

James Bowron, Jr.

In the first place, Colonel Ensley and his Memphis associates having, in 1884, consolidated the various properties of the Pratt Coal and Coke Company, the Alice Furnace Company, and the Linn Iron Works, and thus formed the Pratt Coal and Iron Company, they held, as a matter of course, majority control, while Mr. Hillman, formerly the largest stockholder of the Alice Furnace Company, found that he was being gradually subordinated and had no voice whatsoever in the control or operation of his own blast furnaces.

Now T. T. Hillman, having in him the blood of more than seven generations of Dutch iron workers, was not one to stand by and see himself ousted by "a Tennessee horse trader," as some of Ensley's enemies termed him. And, for instance, when Alice broke the record and turned out one hundred and fifty tons of pig iron, the largest daily run of any single blast furnace in the entire South, in 1886, the way Enoch Ensley took on the glory of it was enough to stir black blood. So Hillman brooded and figured; he saw himself in a *cul-de-sac*, and saw that to relieve the situation he must either back out or else get behind the Ensley crowd and buy up the majority stock of the Pratt Coal and Iron Company. But he had not sufficient funds for the latter move.

He knew, however, a man up in Nashville who, just about that time, was having troubles akin to his. This man was Colonel Shook, formerly general manager of the Tennessee Coal, Iron, and Railroad Company. He had been frozen out of office by the action of W. M. Duncan. Mr. Duncan, it seems, had acquired, in Wall Street, majority control of his neighbors' mining company, and had borne down on them relentlessly. Colonel Shook, with Mr. Baxter as his side partner, joined forces and mapped out a line of action to recover the lost ground. Their plan, consummated after more than a year's diplomacy, was, in brief, simply to enlist John H. Inman's capital to take up options on the Pratt Coal and Iron Company, which had been secured from Colonel Ensley. These options, amounting to $2,250,000, at seventy cents on the dollar, were then offered through Inman's agency to the Tennessee Company.

It was a beautiful plan, and it worked. The officers of the Tennessee Company entered into negotiations in 1886. Colonel Ensley at first approach burst out laughing. "So the tail would wag the dog, eh?" he said, and he laughed a good deal. But

when he discerned the true status of affairs he turned mad as a bull. It was of no use, however; the trade was on in full swing. The very name of the Pratt Coal and Iron Company was submerged in the transaction. The Tennessee Coal, Iron, and Railroad Company had the lead in that it was the older established corporation and its securities having been listed on the New York Stock Exchange for years would, it was reasonably urged, color the new securities with a market value they would not otherwise possess. Thus, the Pratt Coal and Iron Company with all its properties was conveyed to the Tennessee Coal, Iron, and Railroad Company in the year 1886; and Hillman became square with Ensley, and Shook was reinstated.

The Tennessee Company, while new on Alabama ground, had cut quite a figure up in Tennessee. The singular and dramatic events of its early makings, no less than those now destined to circle about its course in Alabama, under the auspices of the United States Steel Corporation, give to it life and color altogether apart from ordinary coal and iron company records. They are worth pausing over, therefore, and giving a long backward glance, by which to see events the plainer, as the company sets to work building on Enoch Ensley's hope. The Tennessee Coal, Iron, and Railroad Company had source in the mountains of Tennessee, high up on the tiptop of that spur of the Cumberland Plateau which is two thousand feet above sea level, and which is still called by its Cherokee name, Sewanee (Big Mountain). The domain of the University of the South, forest and cove, valley view, rock, ravine, and waterfall, runs wild to-day within gunshot of the Old Coal Bank, or Little Mountain Cove, where the first meager drift was opened up by the Sewanee Mining Company, parent stock of the Tennessee Company, early in the eighteen-fifties.

The founding of the university itself on that superb and militant site, fortified by sandstone escarpments, was the direct result of the old mining company's gift of land and of its little will-o'-the-wisp of a railroad, which, locking lights with the Nashville, Chattanooga, and St. Louis Railroad at the mountain's base, pointed out the ascendancy of the big rock and the possibility of other uses out of it, beyond the digging of coal.

All that southern portion of the Tennessee country was, up to the middle of the nineteenth century, practically undiscovered ground, known only to the hunters and trappers and the

hill-folk born and bred in the mountain cornfields. It was shut, as in a vise, from civilization. Talk of cutting it with a railroad from Nashville to Chattanooga, and, at length, the railroad itself, incited exploration. A young Irishman, named Leslie Kennedy, started out to climb the plateau and see what he could find. He tramped poor, naked soil mile on mile where scrubby little chestnut trees drew bitter sustenance, and many a dying oak bowed to the sharp-edged winds. High up in the ridges he plodded and searched, when, all of a sudden, he struck coal. Straight back to Nashville he turned with pockets bulging. Fair news he held it; in fact, discovery!

No one in Nashville, however, got excited. No one took any stock in the young Irish stranger, his coal talk, or even in his good specimens of coal. Mountain land was mountain land, people thought, and there was an end to it. Kennedy could get no hearing anywhere until he met William N. Bilbo, Esq., of the law firm of Bell and Bilbo. (This Bell was the great John Bell whom the Tennesseeans count their best man next to Andrew Jackson, and record of whose career masses up so big in United States political life.) Mr. Bilbo became interested in the young Irishman's coal business at once.

W. N. Bilbo was an odd genius and crammed with idiosyncrasies. He wore ultra-elaborate waistcoats and long Burnside whiskers; had extraordinarily elegant manners, and altogether quite led the fashions of ante-bellum Nashville. He was, indeed, a fair Beau Brummel, with a profession added; and a great figure of the bench and bar of old Nashville. He was an odd figure, surely, to take hold of shaggy mountain land. But off he went into the wilds with the young Irish enthusiast, and the town laughed in its sleeves. Bilbo then saw the coal with his own eyes; he saw that coal was the very bedrock of the whole plateau. Together the two prospected. Across in Grundy County they ran upon old Benjamin Wooten, one of the "characters" of that region, who was digging coal himself, and actually making money out of it. He hauled it down the wagon roads and sold it to the blacksmiths in all the little valley towns around for miles. His boys had found the coal first, he said, while out fox hunting. "The fox run in under the stump of a blown down poplar tree," he said; "the boys started diggin' an' struck up on them black stones, an' brought them to me." He knew coal! s' help him, he hoped, when he saw it, and he

thereupon got a grant of three hundred acres of the land around that old poplar root, and had worked it ever since.[1]

He was quite willing to part with it, however, for a consideration. Mr. Bilbo acquired not only the Wooten lands, but all others on the plateau that he could get by option, straight purchase, or by gift; for some of it the owners were glad to give away to save paying taxes. This was in the latter part of 1851.

"The lands at this time had, in fact, absolutely no value," Colonel A. M. Shook stated in a brief address concerning the work and origin of the Tennessee Company, delivered at Sewanee in 1887, before the Tennessee Historical Society. "Men would not buy them even at twelve and one half cents per acre, and pay taxes on them. It was therefore easy for Bilbo to obtain large tracts of these lands at very low prices, acquiring some by gift, others by purchase."

It was not long before Bilbo's new doings were known in Nashville and people said they "had always thought that fool lawyer man was daffy, but now they knew it." Everywhere all over town he was laughed at, — he and his mountain land purchase. So John Bell's side partner hastened to New York and came back shortly, with what some local wag called his New York "catch." That is to say, Samuel F. Tracy, Colonel Bachus, John Cryder, Boorman Johnson, capitalists, and Major A. E. Barney, civil engineer. Upon inspection of the properties, they straightway invested. Bilbo closed his trade, and came out fifty thousand dollars to the good, — spot cash. "And," said Mr. Baxter, who relates the incident, "that trade was the talk of the town." It was declared at once that old Bilbo had a wise head on his shoulders, and was a good deal smarter, after all, than folk thought him. Old Bilbo was "just all right," they said.

Mr. Bilbo then built himself a house in Nashville that suited his desire, — a house as ornate as his precious waistcoats, as impressive as his Burnsides. And here he dwelt in contentment for the rest of his days, confining himself solely to the law from that time forth — for what had happened once might never happen twice, and he stopped, as events subsequently proved, at the right moment.

[1] Old Ben Wooten was the second man in Tennessee to dig coal and sell it even though on so minute a scale. The first man was Henry W. Wiley, and he mined (or rather quarried) his coal on the Indian fork of Poplar Creek, near Oliver's postoffice, and loaded it on long narrow barges and steered them down the Tennessee River to Huntsville, — a perilous way.

Meanwhile, Mr. Tracy and the other New Yorkers lost no time in organizing themselves into a Tennessee Company and getting out a charter. "It is supposed," said Colonel Shook, "that Leslie Kennedy first applied the name of Sewanee to the coal he had discovered, calling it all the Sewanee vein." At any rate, this name was given the coal, and was adopted by the New York men, who called their organization the Sewanee Mining Company. The charter was given in 1852 by the Tennessee Legislature. The caption of the act incorporating this company was "An Act to incorporate the Southern Baptist University of Memphis, Tennessee." When the bill was on its final reading, an amendment was offered incorporating the Sewanee Mining Company, located in Franklin, Marion, and Grundy counties, Tennessee, with powers to build and operate a railroad from Cowan, Tennessee, to the coal fields in Grundy and Marion counties, and to mine and sell coal.

The first move of the officers then was to build their transportation line and connect their coal field with the Cowan junction of the Nashville, Chattanooga, and St. Louis, which was then just completed. Major Barney set to work locating the line. He was at once taken by the neighboring folk for an escaped lunatic. Imagine, they said, locating a railroad straight up to the clouds. "No locomotive on God's earth could ever pull itself up that mountain," they said. The contractors following the major were looked on as birds of his feather. The whole project was ridiculed from start to finish. It was early in 1853 that the contracts were let and the work begun.

This little railroad is known to-day as the Tracy City branch of the Nashville, Chattanooga, and St. Louis. It is a twenty-seven mile line from Cowan to Coalmont. It runs due east a mile or so, alongside the main line; just at the tunnel's mouth it describes a quick half circle and takes a leap to the woods; it winds then, coil on coil, like a huge scorpion, up the steep plateau, under the broad-leaved, red maples, over the oak flats, up to the hickory slope, through locust, kalmia, sweet gum, and flowering dogwood, by the groves of Sewanee, on to Monteagle, and passing Tracy City, at length reaches Coalmont. It crawls over the very top of the coal seams. There are three thousand square miles of coal up there on the plateau, all told, — five thousand tons to the acre.

The little railroad takes a straight rise of twelve hundred

feet, and has in places twenty-four degrees curvature. From Cowan to the top of the plateau it is a ten-mile stretch with only one tangent of six hundred feet upon the entire line, while the average grade is one hundred and twenty feet to the mile. This mountain railroad made a sensation. It was distinctly an engineering feat and a big event in railroad construction in the United States in the early eighteen-fifties. Certain it is, it took a fair degree of skill, hard labor, and dollars and cents to put it through. It was the only railroad built in Tennessee prior to 1870 without State aid.

Cowan Junction itself, named for one of Andrew Jackson's 1812 officers, is a smoke spot in the hollow. Cinder walks crumble about a dingy frame depot. A few stores, "hotels," and a little group of houses make up "the city," a stop-off point between Nashville and Chattanooga.

By the year 1855 the road was completed up to the Sewanee vein. This was opened by the young Irish prospector, Leslie Kennedy, who entered the employ of the new company. The first coal was shipped from this vein in 1856. Kennedy became mine boss and was called "Cap'n." He got him a wife and one hundred acres of farm land on the mountains, atop of the coal seam, and he stayed with the works till he died. Although the coal of the Sewanee mine was fair enough in grade, the seam was thin, and the area covered at that point comparatively small for the extensive operations in view by President Tracy and his associates.

The value of "Old Man Wooten's fox hole" was by this time appreciated by the company, and they decided to open it up. They extended the track ten miles further to this point and opened up No. 1 entry of the group known as Wooten Bank, which, together with Nos. 2 and 3, Lone Rock and East Fork, are being operated at the present time by the Pratt Consolidated Coal Company.[1]

Some log shacks, a pine board commissary, and a corrall were raised, and the camp was named Tracy City. Two mine locomotives, one called the "Samuel F. Tracy," and the other after a French general, were then purchased with a few coal cars, flats, and mine cars, and on the eighth day of November, 1858, the first carload of coal was sent out from Tracy City.

[1] This Pratt Consolidated Coal Company is not to be confused with the old Pratt Coal and Iron Company, but is a distinctly modern organization.

What coal supply then fed Nashville was shipped by boat from Pittsburg, floated down the Ohio, and steered up the Cumberland. The new Sewanee coal put Pittsburg out of the market in short order. That was not, however, saying much, for the sales did not come anywhere near paying costs. "All of the railroads burnt wood up until the seventies," Colonel Shook says, "and only millionaires could afford to buy coal." Up to the time the rails were laid down at Tracy City the operations of the Sewanee Mining Company had cost six years of hard labor and one million six hundred and seventy thousand dollars, with not one cent in returns.

Coincident with the initial operations of the Sewanee Mining Company in 1857 the project of the University of the South was set on foot. The idea was forged on Lookout Mountain at a convention of the bishops and the clerical and lay representatives of the Episcopal Church from nine of the Southern States including North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Arkansas, and Tennessee.

The Sewanee Mining Company gave the domain of nearly ten thousand acres on condition that the college be opened within ten years. Committees set to work; they secured the land, the charter, and an endowment fund of three million dollars. The cornerstone of the main building was laid on a spring day in 1860, and the enterprise was sped on by an assemblage of men and women five thousand strong.[1]

By this year of 1860 the way ahead for the little mining company was indeed precarious. There were some members of the company who scarcely knew a bed of coal from a sandstone es-

[1] Colonel Shook said concerning it: "That cornerstone was a beautiful block of Tennessee marble, the kind we on the mountain call Beefsteak Marble, altogether about six feet square. People came from all over the county that day, thousands of them. Major Barney's railroad did a heavy business. There were no buildings, but dozens of little arbors put up all over the grounds, stocked with good things to eat. The speakers were Yancey of Alabama and Rhett of South Carolina, and I remember there were, at least, two hundred bishops and ministers of the Episcopal Church all in their surplices and gowns. It was a great sight."

By the close of the war nothing was left of any of the buildings started at this time. All that the University of the South owned was its charter and its wide domain, and it was confronted with the fear of losing even the naked soil. In order to keep alive the contract with the Sewanee Mining Company, Colonel Shook says, Major George R. Fairbanks, of Fernandina, Florida, opened school in a log cabin with three mountian boys enrolled in the summer of '68, "and the gift of the land," says Colonel Shook, "was saved in the nick of time. This cabin became known as Rebel's Rest."

carpment, and nothing whatsoever about getting the stuff out of the ground, and there was no labor to get it. The officers were all "city folks," — executives. They could handle the office end, but they soon found they must "get them a mining end to make the office go." President Tracy finally succeeded in interesting a fresh group of business men in the company, prominent among them being Return Jonathan Meigs. It was decided to change the name of the company from Sewanee Mining Company to that of the Tennessee Coal and Railroad Company, as more specific and identified with State interests. The new concern was incorporated March 24, 1860, the day on which the following act was issued by the legislature of Tennessee.

"To Incorporate the Tennessee Coal and Railroad Company, etc.

Section 1. Be it enacted by the General Assembly of the state of Tennessee, That Return J. Meigs, Andrew Ewing, William T. Berry, Edwin H. Ewing, David T. Love, John Reid and their associates and successors and assigns be and are hereby constituted a body politic and corporate, by the name of the 'Tennessee Coal and Railroad Company,' for the purposes of exploring for copper, lead, iron, coal and other ores, metals and minerals, and for mining, working, smelting and vending the same, and for such purposes may purchase, construct or erect all necessary buildings and other apparatus and fixtures for carrying on their operations, a railroad or roads, with one or more tracks, to be run with steam, animal or other power, from any point or points on the Nashville and Chattanooga Railroad to any mineral lands on the Cumberland Mountains and to such other places as the stockholders of said company may deem best and expedient for the interest of said company; may have a common seal, and the same alter or renew at pleasure; enjoy all the privileges incident to corporations, purchase, have and hold in fee simple or for a term of years any real or personal estate, and may mortgage, transfer and convey the same, and by that name may sue and be sued, plead and be impleaded, appear, prosecute and defend in any court of law or equity in all suits and actions.

Section 2. That if the owner or owners of any lands or of any materials necessary for the construction or repairs of said roads will not agree with the board of directors of said company or their agent for the sale or the use of the same, application may be made by said board of directors or their agent to any justice of the peace in the county where said property is situated, who shall thereupon issue his writ to the sheriff of said county for the summoning of a jury of five freeholders, not related to any of the parties or in any way interested, who, after being sworn by the

sheriff, shall make a just estimate of the value of the property required by said company, and the amount so fixed shall be paid by said company to the owners of said property in full settlement of all values and damages.

Section 3. Said company, when necessary, shall have the right to conduct the said railroad or roads across or along any public road or water course.

Section 4. The first meeting of said corporation may be called by the persons named in this act, or by a majority of them, at such time and place as they may select, and at such meeting a board of directors shall be chosen from among the subscribers to the stock by the votes of a majority of the subscribers present at such meeting, and such board of directors shall take charge of the operations of the company, subject to such rules and regulations as may be adopted by the stockholders. The said directors shall hold office for one year or until their successors are appointed, and may adopt such by-laws and regulations for the government of the concerns of the company as they may deem expedient not inconsistent with the rules made by the stockholders as aforesaid nor with the constitution and laws of the United States and of this State.

Section 5. That the directors shall cause a book to be kept containing the names of all persons who are stockholders of said company, showing their places of residence and the number of shares of stock held by each respectively, and the time when they became respectively the owners of said shares, which book shall, during the usual business of each secular day, be open at the place of business or domicile of said company for the inspection to the stockholders and creditors of the company and their representatives.

Section 6. That the said corporation may divide their capital stock into such number of shares and provide for the sale and transfer thereof in such manner and form as they may deem expedient, levy and collect assessments, forfeit and sell delinquent shares, declare and pay dividends in such manner as their by-laws may direct.

Section 7. That the said corporation shall not contract debts until the sum of twenty thousand dollars of the capital stock is paid in, no part of which shall be withdrawn or in any manner diverted from the business of the company, and shall not contract debts at any time to any amount exceeding the capital stock of said company.

Section 8. (This section irrelevant to this company.)

Section 9. That this act shall take effect immediately.

Passed March 24, 1860.

W. C. WHITTHORNE,
Speaker of the House of Representatives.
TAZ. W. NEWMAN,
Speaker of the Senate.

Although this act is frequently referred to as "the original charter of the Tennessee Company," it was the second charter. The first one was given, as has been recorded, in 1852, when the Sewanee Mining Company was organized. Several amendments to the 1860 charter were eventually added.[1]

The reorganized company, to be known no longer as the Sewanee Mining Company but as the Tennessee Company, now got its second wind, so to speak, and set to work with renewed energy. They were jubilant over the success of their railroad and their first triumphs in the Nashville market, but hot weather soon came and the joy was short-lived. Their coal found no market. Beyond the little consumed by Nashville no other town wanted it. Looking ahead, the officers saw a sea of troubles. They could not sell enough to pay their legal debts. Merchants and contractors, at length, in the following year felt themselves justified in entering suit; the courts reached out their helping hands. Just then the cannon boomed over the hills at Sumter by the seacoast, and the mining operations of the hard-pressed little company were blasted where they lay.

. . . . . .

During the war Sewanee became trampling ground for the contending armies. First there were the Confederate forces, Forrest's men, cavalry, and artillery. Camp was pitched at Tracy City, and the mines and railroad were pressed into ser-

[1] On the 13th of September, 1881, the year in which iron making was inaugurated by the company, the charter was changed and amended, and the name of the company was thereby changed to Tennessee Coal, Iron, and Railroad Company. On the 16th of July, 1889, the last sentence of section 4 of the charter was changed and amended to read as follows: "The directors of this company shall hold their offices for the period of two years from the date of their election and until their successors are elected and qualified. That the next general meeting of the stockholders of this company, when a new board of directors shall be elected, shall be held on the first Tuesday in April, 1891, and biennially thereafter there shall he held a stockholder's meeting, when a board of directors shall again be elected, and each two years thereafter a general meeting of the stockholders shall be held for the purpose of electing a board of directors."

On the 10th of May, 1892, the charter was changed and amended by adding the following section: "The capital stock of this company shall be eighteen million dollars, of which one million shall be preferred stock drawing dividends at the rate of eight per cent per annum, cumulative, and the remaining seventeen millions shall be common stock, shares to be one hundred dollars each."

On the 12th of September, 1892, the section of the charter added thereto on the 10th of May, 1892, was so changed and amended as to read as follows: "The capital stock of the company shall be twenty-one million dollars, of which one million shall be preferred stock drawing dividends at the rate of eight per cent per annum, cumulative, and the remaining twenty millions shall be common stock, shares to be one hundred dollars each."

vice. Over in Sequatchie Valley, near the Ally farm creek, a skirmish took place. Nat Baxter, Jr., from Freman's Battery, hitched up his guns, hauled his howitzers down the rocky heights, let loose on the Yankees, and gave and took. The Federal forces then held the mountain on the fall of Donelson; they shivered the marble cornerstone of the University of the South to splinters and blew up every vestige of the young college.

They then mounted their guns at Tracy City. One Yankee who came into the country with General Rosecrans, Frank Howard by name, operated the camp, and had the works under lease at the war's close. Club-footed mining methods were destroying all future values, and the mines so robbed as to render the whole place perilous. Shadows of camp, of track, of mine, and only a little ghost of a company quivered there on the mountain crest, when Arthur St. Clair Colyar, who became the company's first big reorganizer, was induced by the Tennessee creditors to take the thing in hand.

Colonel Colyar was the son of a trapper. He was born in the woods near Jonesboro, Tennessee, in 1818; his only legacy was a few steel traps with some coon skins. When he came of age he had learned how to read and write, and soon became a teacher in a mountain school. He read law at night, and began to write for the Nashville papers. He was tall, long-armed, lean and bony, and full of grit. He moved into Winchester and began to practice law, and in the sixties was elected member of Congress to the Confederacy, though a Union man every inch of him. His career as one of the men of public affairs of Tennessee has extraordinary points. He was editor of the *Nashville American*, and the founder of the *Nashville Union*, author of the "Life of Andrew Jackson," and the first American to write of the South as an iron-making center.

He established precedents, made great innovations, and once, indeed, he put the whole of Nashville in the hands of a receiver. But that story belongs in the archives of Nashville town. Major E. C. Lewis once heard Colyar make a speech of such power that the speech and the man have been inseparable in his mind ever since. "It was in defence of Andrew Johnson," said Major Lewis, and he tells the occasion of it thus:

"Andrew Johnson had been provisional governor of Tennessee, vice-president, president of the United States, and was back in Tennessee as candidate for the United States Senate. Isham

G. Harris was opposing him, and playing upon the prejudices of the people, who at that time were hot against anything Federal, by denouncing the actions of Johnson here in Nashville, when he made the banks give him fifty thousand dollars. Harris said he robbed the banks, and for that act alone Johnson should be damned forever. Everybody was afraid of Harris. Colyar was not. Colyar did n't care anything about Andy Johnson, but he knew that Harris' ascendancy meant no good for Tennessee. So he opposed him. He followed Harris in a speech. He said the facts were that Andrew Johnson found forty thousand people here in Nashville without food and without fire. He went to the banks and said, 'We must take care of these people; you give me your money, which is useless to you under present conditions.' They gave him the money on his guarantee that he would see that the Government paid it back, and to show his faith he indorsed the notes to the several banks for the amount. The entire debt had been paid at the time Harris denounced Johnson. Colonel Colyar said Harris had left Tennessee with a million dollars in gold of school money and run off at the first fire, and kept that money the whole four years of the war, paid himself and his staff their regular salaries, though never within the State, and never doing any service to the State, then ran off to Mexico, and now had come back to denounce Andrew Johnson for borrowing fifty thousand dollars with which to feed the starving people at Nashville. 'If,' said Colonel Colyar, 'Johnson should be damned eternally for this fifty thousand dollars, don't you think, fellow-citizens, Harris should go to hell for at least a thousand years?'"

There is no kind of argument that takes in Tennessee like this kind, and Colonel Colyar was a made man from that day forth.

Meanwhile, in the early spring of 1866, the Tennessee Coal and Railroad Company was sold under a decree of the Supreme Court of Tennessee, bills having been filed in the State court by the Tennessee creditors, and the whole property was bid in by the latter for their debt. About the same time the New York creditors filed bills in the Federal Court, and had all the property sold under a Federal Court decree, at which sale the New York creditors became the purchasers; so in 1866 there were two claimants to this property. The situation called, indeed, for a Solomon. Colonel Colyar went to New York and effected a compromise with the New York creditors by which it was agreed that $220,000 of first mortgage bonds should be put upon the property, and these bonds turned over to the New York creditors. They, in turn, agreed to accept these bonds in full payment of

all claims against the property. The debt of the Tennessee creditors amounted in round numbers to $140,000. It was agreed that $400,000 of stock should be issued, and held in escrow until this $140,000 of debt was paid, when this stock would be distributed ratably to the parties who paid this debt. Colonel Colyar went to work getting up these claims and sold everything he had, putting the proceeds into the liquidation of this debt, and he finally succeeded in clearing up every dollar of the indebtedness, when all of the $400,000 of stock was issued and turned over to him. He took charge of the property as sole owner on the first day of April, 1866, and placed his uncle, Uriah Sherrill, in charge as superintendent and manager. Sherrill was a descendant of "Bonny Kate" Sherrill, whose life and whose wedding to John Sevier, "the lion of Franklin," makes one of the romances of the early history of Tennessee. Sherrill gave place to G. A. Shook of Winchester, who sent for his nephew, Alfred Montgomery Shook, just out of the wars, to help as clerk in the store. Young Shook was then scarcely twenty years old. His folk had a farm in Franklin County, near Winchester, where, on July 16, 1845, he was born, and where he worked until 1862, when he enlisted in Forrest's old brigade, Third Tennessee Cavalry. He saw a rough time. Wounded and captured at the second battle of Fort Donelson, he was sent North to Federal prisons; he pulled through the penitentiary at Alton, Illinois, and hobbled around Fort Delaware prison twenty-six months on crutches; he was paroled in 1865 and sent South. A tall, well-made, square-shouldered young fellow, with a thick crop of black hair blowing back off a finely modeled brow, — he was called "the best-looking young fellow on Big Mountain." Indeed, he has a strikingly picturesque personality. In July, 1886, he started in business as clerk in the store of the Tennessee Coal and Railroad Company with little prospect ahead for anything. The visible assets of the Tennessee Coal and Railroad Company then consisted, according to Colonel Colyar, of "defective titles to thirty thousand acres of land; a washed-out roadbed of a railroad track; ten tons of coal lying outside the ruined entry of Wooten's Bank; the old red mule, Kate, that had been feeding off the chestnut ridges so long; *and five Barlow knives.*"

Colonel Colyar sold his farm and put his ex-slaves on wages in the mines, — mending and laying track and generally re-

pairing and rebuilding. To float a company on air is a thing a good many business men have had to do, and have done, all over, everywhere. They know what it means. Colonel Colyar still retained his law office in Nashville, which was a room over the Bank of the Union. In 1868 A. T. Duncan was president of this bank and he had lately got in his brother-in-law, James C. Warner, as cashier.

Mr. Warner had had rather a varied career. He, too, was a Tennesseean. He was the son of a tailor, and was born in Gallatin, Sumter County, 1830. He stayed on the tailor's bench, like President Andrew Johnson, till he was almost grown; then he struck out for Nashville and got a place as clerk in a wholesale grocery store. Several years later he set up in the hardware business for himself in Chattanooga, and took some part in the municipal affairs of that town, and finally became mayor. He also became secretary and treasurer of the Will's Valley Railroad, now a part of the main line of the Alabama Great Southern, between Chattanooga and Birmingham. Entering the political field, Mr. Warner was elected in 1861 a member of the Tennessee Legislature, which was in session at Nashville when Fort Donelson fell; of course his political career fell with it. He then went into the banking business.

Colonel Colyar used to talk up his "big" coal mine schemes a good deal around the Bank of the Union, and, in fact, all over Nashville, and everybody knows the colonel was always "a right-fair talker." Both Duncan and Warner became so deeply interested, at length, that Duncan put up some capital and (Colonel Colyar resigning) was made president of the Tennessee Company, while Warner was put in as secretary and manager, displacing W. Houston, June 15, 1868. The company was again reorganized.

In behalf of the struggling coal company Colonel Colyar also succeeded in enlisting the interest and capital of several other business men of Nashville, among them being Judge James Whitworth, president Fourth National Bank; L. B. Fite, Sam Tate, president of the Memphis and Chattanooga Railroad, and Moses Wicks, each of whom served as president of the company off and on during the next decade. The early presidents of the Tennessee Coal and Railroad Company were somewhat like Finnegan's message to Flannigan, "On agin, off agin — gone agin." James C. Warner remained steadily as manager.

On one occasion (in 1869) the Tennessee Company could not meet its taxes of sixteen dollars and forty cents. The sheriff of Grundy County came out with a distress warrant but he could find nothing at Tracy City to levy on but the old mule, Kate. Accordingly, he attached Kate and started to ride her into Jasper, but Kate would not budge.

"I scurried all around over the country," said Colonel Shook, "to raise that sixteen dollars and forty cents, for we had all sooner gone without breakfast than lose Kate. I got it at last, and Fry Nunley, Kate's driver, and all of us were happy, and so was Kate."

Young Shook was James C. Warner's close second by this time, in the management of the company. It struggled along, beating the winds for several years. It barely paid costs. Warner and Shook stayed right with their work and did what they could to straighten up things without any money. "Our locomotive used to run on the cross ties half the time," Warner said once, in speaking of these days, "and we had to follow it with a man on horseback to report its whereabouts."

Colonel P. H. Marbury of McMinnville, Tennessee, president of the McMinnville and Manchester Railroad Company, served as general manager from 1869 to 1870, while Warner acted as secretary and treasurer. A contract was made with the State of Tennessee in 1871 by negotiations with the firm of Cherry, O'Connor and Company, by which the use of State convicts for coal mines was secured. Prior to these negotiations convicts had been worked in a little coal mine in Sequatchie Valley operated by the father of Major E. C. Lewis, the first instance on record of using convict labor in the Southern mines. The contract with Cherry and O'Connor was, however, the first instance on a large commercial scale.

The output of coal was gradually increased as the demand would take it, but in the early eighteen-seventies it became plain that if wider market were not created everything would go to the wall, in spite of the quality of Sewanee coal. Domestic coal was up to that time the sole product for which there was market. Every officer in the company became discouraged excepting Colonel Colyar.

The colonel stoutly maintained that the demand would come — was bound to come — but to the others it looked uncertain indeed. Things drew to a climax. The project of abandoning the whole

proposition was at length discussed, and every man except Colonel Colyar was for dropping it where it lay.

"No!" cried the colonel, "we will keep on! I expect to see the time when the Tennessee Coal and Railroad Company will mine and sell as much as three hundred tons of coal per day!"

All hands in the company then started in with renewed vim to boom up a market. They found the only way to use up their slack coal would be to make coke. Then the question was, would their coal coke? Nobody knew. General Manager Warner and young Shook went North to find out how to build a coke oven. At Scottdale, Pennsylvania, Thomas Lynch, superintendent of the H. C. Frick Coke Company's valley works, turned cicerone to the energetic Tennesseeans and showed how coke was made. Lynch never forgot Alfred Montgomery Shook. According to Erskine Ramsay, years later he used to tell about "the fine looking young mining man who came out of the Tennessee Mountains," — never dreaming that this same A. M. Shook would, in time, get to be young Ramsay's first Alabama boss.

After the inspection tour of several of the great coke regions, Warner and Shook returned to Tracy City and put up one hundred beehive ovens, and found Sewanee coal could make coke "nearly as good" as Henry Clay Frick's coke. Next they thought they would build them a furnace and find out if their coke could make iron. So they set to work, getting sandstone, blacksmith bellows, a stovepipe, an oil barrel for water, and they finally "invented" a furnace. They got power from the Tracy sawmill, and they had an elevator for the stock somewhat like a dumb-waiter. The day the "invention" went into blast James Warner said, in the midst of the flying sparks, "she's a fiery gizzard, all right." So "The Fiery Gizzard" it became from that time forth. This was the original coke furnace of the Tennessee holdings of the United States Steel Corporation.

"There's a creek up there in Tennessee," said Colonel Shook, "that was also named the Fiery Gizzard a century ago, after a Cherokee chief. There's another story, too, about that name. Some hunters camped alongside the run to cook a wild turkey they'd shot. One of the fellows could n't wait for the gizzard, but hooked it out of the hot skillet and put it in his mouth. He yelled like a maniac, and threw it in the stream. His language and the hot turkey gizzard," observed the colonel, "according to the story, set the water on fire!"

"The Fiery Gizzard's output of iron," said the colonel, "was five tons a day; *total* fifteen tons!" He paused and looked reminiscent: "The stovepipe fell in on the third day," he explained. It proved the uses of Sewanee coke, however, and the reduction of Red Mountain ores, and, as a matter of fact, led to the erection, shortly afterwards, of the Sewanee Furnace at Cowan and the blast furnaces at Chattanooga. The company had now both use for its slack coal and market for its coke. And when the railroads won out on the fight for coal, fair prospects were ahead.

One morning in early April of 1874, Major T. S. Thomasson of Chattanooga ran up to Tracy City with two visitors, Colonel Babcock of New York and James Bowron, Esq., a gentleman from London, England. Mr. Bowron was on the lookout for mineral properties. He had been making, it seemed, an inspection tour of North America with the view to building up an industrial community with English capital; erecting furnaces, shops, and foundries, and opening coal and iron mines. He represented a syndicate composed of English iron-masters of the Cleveland District, of England, and a member of Parliament or two. On introducing his friend to Colonel Shook, the major said, in an aside, "Millions back of him!"

James Bowron, Sr., was then about sixty, but was as fine in physique and robust in constitution as a man much younger. "He had the manners of a Chesterfield," observed Colonel Shook, "but he never could get on to the way we handled Tennessee batter cakes."

This was Mr. Bowron's second trip to the United States. He had toured the States by this time; "had studied the West Virginia field; had prospected through New England and up into Canada; had surveyed the great Southwest; had crossed the Rio Grande; trodden Mexico, and reviewed California." Now he had taken a bit of a fancy to the mountains of Tennessee; he had become, indeed, rather keen on the Cumberland Plateau country. His boxes he had left at the Stanton House in Chattanooga, and he was now in light marching order for a thorough going over the ground. Armed with diamond drills and various other boring devices, the elderly and energetic Englishman tramped over the plateau, day after day, week after week, in foul weather and fair. At length one spot took his eye, —

the old Ally farm nested in a cove of the Sequatchie Valley (Sequatchie was Cherokee for "hog wallow," and Tennessee meant "crooked spoon"). This farm was at the big bend of the Tennessee, where Andrew Jackson and his men had crossed in the beginning of the century into Alabama. The broad brown river swept curving, midway the valley, between the Cumberland Plateau — all coal — and Walden's Ridge, which was all iron. Down from out the steep, wooded, Cumberland side, and flowing to the river, past the Ally farm, gushed the historic little Battle Creek that got its name in the wars.

To James Bowron, standing on the Cumberland Heights and looking down a thousand feet below, it seemed the place he wanted for the making of a town. Aside from the picturesque and curiously beautiful aspect of the place — then all grown in fruit and corn and cotton, and wild and sweet with mountain laurel and azalea, the practical advantages struck his English eye. It was only forty miles below Chattanooga and direct on the Nashville and Chattanooga Railroad. It had river frontage, high location, good water supply, natural drainage facilities besides rich fields of coal and iron. It was the very place he sought. He made a careful survey, selecting his mines. He hastened back to Tracy City, and asked Colonel Shook and Mr. Warner to introduce him to the president of the Nashville and Chattanooga Railroad, E. W. Cole. He wanted to see if that official could be induced to extend a track to the mines he had determined on opening. He found Mr. Cole favorable to the proposition. After communicating with Thomas Whitwell and the other members of the English Syndicate, the Ally farm was purchased as a site for a town, and contiguous coal and ore lands to the extent of one hundred and sixty-three thousand acres were acquired.

Always an admirer of the hustling Pennsylvania mining town, Mr. Bowron named his town South Pittsburg. That he might not seem to honor England less, he, however, named the coal mines station Victoria, as a tribute to his queen. And Victoria it stands to-day. Further details relating to these projects and achievements of the Southern States Coal, Iron, and Land Company will be treated presently upon its merger with the Tennessee Company.

The coal and iron business of the Cumberland Plateau

country began now to promise fair going, having in operation the Tennessee Company and a close neighboring enterprise. By the year 1879–80, however, the control of the Tennessee Company properties passed from the doughty lawyer, Colonel Colyar, to the firm holding the lease of the State convicts. Ownership of the Tracy City coal mines and coke ovens was now acquired by four men: Thomas O'Connor, W. H. Cherry, William Morrow, and Alfred M. Shook. This holding was transferred for hire of the convicts, debt for which had been accumulating for ten years.

The Tennessee Company was again reorganized, and William Morrow was elected president of the new organization. He was then State treasurer of Tennessee. He was born in 1839 in Jacksboro, Campbell County, and educated at the University of Knoxville. He was interested financially in the Rising Fawn and Chattanooga furnace companies, as well as in the Tracy City operations. Throughout his life he has been more or less identified with the coal and iron business of Tennessee.

Early in the year 1880 the new officers of the Tennessee Company purchased one hundred acres at Cowan Junction, and organized the Sewanee Furnace Company. A fifty-ton blast furnace was constructed in order that a market might be provided for the slack coal of the Tracy City mines. This furnace, yet spoken of as the Old Sewanee furnace, successor to the Fiery Gizzard, was the first bona fide blast furnace of the Tennessee Company, and it was designed and constructed by Major Edward Doud. Three Whitwell stoves and two Weimer blowing engines were installed, making it thus the most up-to-date proposition in the way of a blast furnace in middle Tennessee in the year 1881. Its cost was $100,000, and under Major Doud's management it paid this cost the first year. During Mr. Nat Baxter's régime some years later, the Whitwell stoves and the precious Weimers and all the machinery of the furnace were moved down to Ensley, Alabama, and patched up into No. 5. The old Sewanee furnace had been in operation but a short while when the officers of the Sewanee Furnace Company merged it into the Tennessee Company's holdings.

Shortly after the company started iron making, a young man named George B. McCormack received the job of shipping clerk at Tracy City. He had been in and around the neighborhood for a few months, but no one on the mountain knew much about him beyond the fact that he was "very quiet," and that he had

come "from somewhere in Arkansas." He had been acting as coal agent for the Memphis and Charleston Railroad, and was stationed at Tracy City by the superintendent, R. B. Pegram. He had, in fact, brought a letter of introduction to Pegram from an official of the St. Louis, Iron Mountain, and Southern Railroad. Owing to ill health, young McCormack had resigned his position as telegraph operator and station agent in their company. The duties of coal agent had their limitations, however. Seeing that six or eight cars of coal were correctly weighed each day by the Tennessee Coal Company for the Memphis and Charleston Railroad was a pretty slight task. Yet, indeed, it was about all the boy had strength to attend to. Chills and fever, gotten in his system while working at the malarial stations down in Arkansas, had laid him waste. He had been assigned by the St. Louis, Iron Mountain, and Southern Railroad to Arkansas from the year he started out to make his own way.

He was a farmer's son, and his folk were Scotch-Irish. He was born in Jefferson County, Missouri, April 4, 1859, and attended the little county school until about his thirteenth year, when his father sent him to boarding school for a short term. He was an odd, shy, patient little fellow, with a fine-shaped head and sharp, keen senses. He had, too, a certain dry humor. He kept to himself a good deal and had a great turn for inventions. For instance, he had not been many weeks in the school before he rigged up a "telegraph line" to the room of the boy across the hall. At night, at recess, and in between recitation hours, he would send most important messages to that other boy; he would save trains from wreck, tell of fires and battles and presidential elections.

Telegraphy taken up thus "for fun" served the boy in good stead. The very next year, when conditions at home made it necessary for him to quit school and go to work for a living, he had a profession at hand, young as he was. With but little more study and practice he was qualified to be a professional operator and secured a place with the St. Louis, Iron Mountain, and Southern Railroad, and was ordered, as has been said, to the swamps of Arkansas. From here, just a few years later, emaciated, physically a wreck, he came to the mountains of Tennessee in hope of health, where he got the job of weighing six cars of coal a day for thirty dollars per month.

As the plateau air got into his lungs he began slowly to gain new vigor. Having coal at hand, he decided to study mining and got together what books he could and did a considerable amount of reading on the subject. During loafing times he fished and hunted, and to this day likes it better than most anything. All of a sudden Pegram decided that weighing the coal was not necessary and the boy found himself out of a job again. It happened that the Tennessee Company needed a shipping clerk, so Shook took on young McCormack, agreeing to pay him thirty dollars per month. There was more horizon to this sort of a place than there had been with the Memphis and Charleston, and it became evident to Warner and Shook that the young man needed simply a little more room to turn around in to prove his nettle. The assistant general bookkeeper resigned and young McCormack took up his duties in addition to those of shipping clerk. He was so accurate, quick, painstaking, and conscientious in the office work that he was soon made general bookkeeper and cashier, then train dispatcher, and given a raise of ten dollars.

As train dispatcher he had entire charge of the operation of old Major Barney's "sky railroad." This road was then, in spite of Colonel Colyar's and Mr. Warner's heroic efforts, not much more than a couple of streaks of rust up through the woods. It was very loosely run. There was no system; no management. Young McCormack put the road in some sort of working shape; he introduced the selling of tickets, the checking of baggage, and the way-billing of freight. Nothing got mixed up or tangled any more. McCormack never forgot the slightest detail, nor slurred it over. Detail was his strong point. He was quietly energetic, he never "kicked," and never "bossed." All the men on the works began to like the boy in time and the way he did things. It was found, in fact, that the young man was game. He never undertook anything that he did not put through. And he was not afraid of work.

One afternoon Colonel Shook chanced to remark in the office that he thought he would get him a stenographer. Young McCormack looked up from the debit and credit columns: "I'd be glad to see if I could take your letters, Colonel Shook," he ventured, "if you'll give me time enough to get hold of a shorthand book."

"How much time d'ye want, Mac?" the colonel asked.

"I'd like to have three weeks or so."

"All right," said the colonel.

In less time than that George B. McCormack reported to the general manager for duty as stenographer, and he suited the colonel right well. In short order he became expert. He got another raise, which brought his salary up to fifty dollars per month for everything combined — shipping clerk, general bookkeeper, cashier, train dispatcher, railroad superintendent, and stenographer and private secretary to General Manager Shook. At the time that young McCormack entered the service of the Tennessee Company, the four mines then in operation at Tracy City were turning out one thousand tons of coal per day. One hundred and seventy-six coke ovens made seventeen cars of coke daily and the company supplied Chattanooga, Terre Haute, and the South Pittsburg furnaces. Four hundred convicts were employed. The railroad, comprising main stem, branches, and sidings, was now twenty-seven miles in extent and there were four other locomotives, together with one hundred and fifty main line cars.

Major O'Connor was at this period the main backing, in a financial way, of the little company. He was, from a money standpoint, one of the big men of Tennessee. He was known all over the State, and cut something of a figure in politics. He had, in fact, been spoken of as a likely candidate for vice-president of the United States in the Hancock convention of 1880. At the time that he became a majority stockholder and director of the Tennessee Company he was president of the Mechanics' National Bank of Knoxville, and was, at the same time, interested in many railroad and mining enterprises. His partner in the Tennessee Company affairs, William Harrell Cherry, was a native Tennesseean from old North Carolinian stock. He was born in 1822 in Lowryville, Hardin County, and was educated in Savannah, Georgia, where he began in the banking business. General Ulysses S. Grant made Cherry's Georgian home his headquarters before the battle of Shiloh.[1] After the war Mr. Cherry became president of the Merchants' National Bank of Memphis, but in 1881 he moved to Nashville, where he eventually became associated with William Morrow and Thomas

[1] Data received from Mr. Cherry's granddaughter, Juliet, the wife of Webb Crawford, president of the American Trust and Savings Bank of Birmingham, Alabama.

O'Connor. At his death Mr. Cherry owned over $100,000 worth of Tennessee Company stock, then listed on the New York Stock Exchange for twenty-five to fifty cents on the dollar, but he never considered this stock "worth the paper it was written on."

Late in the fall of 1881 John H. Inman, senior member of Inman, Swan, and Company, one of the largest cotton houses in the world, acquired majority interest of the Tennessee Company's stocks. Inman was a Tennesseean and an ex-Confederate soldier. He had gone to New York City just after the war to work as clerk for his uncle in the cotton business. He gradually built up a trade of his own, adopted the policy of buying and storing his cotton and not dealing in futures, and soon established a sound credit as a base on which to rear the superstructure of his far-reaching operations. He became a member of the cotton exchange and a large individual holder of securities in various Southern railroads. He was president of the Richmond and Danville Railroad, and one of the most conspicuous of the group of Southerners in the Empire State. "In some respects," the *New York Sun* has said of Inman, "he was a carpet bagger in Wall Street." Certain it is he was shrewd, and made more money and lost less than any other cotton speculator on record. He was received in Nashville with open arms. He had letters of credit to the various banks of the city, among them one to the president of the First National Bank of Nashville, Nathaniel Baxter, Jr.

"Nat" Baxter, like his brothers, had been born and bred in the law. The name Baxter is a well-known name in Tennessee; the men of the family were lawyers, bankers, and judges for generations, — "all told, a brainy set," says T. H. Aldrich. When Nat Baxter, Jr., was born in 1847, at Columbia, up in Maury County, his father was judge of the circuit court of Nashville, a position held by him for twenty-eight successive years. His boys took to the law as ducks to water. Young Nathaniel went in a trifle for tactics in addition, as most of the boys around there began to do while there was war talk in the air. In his fifteenth year he enlisted as a private in Freeman's Battery of Artillery, and served with General Forrest all over the Cumberland country. He was twice wounded, and at length captured at the battle of Franklin and put in a Federal jail. His war experience is related in detail in John Allen

Wyeth's "Life of Forrest." After the war Nat Baxter settled down in Nashville and studied law. He soon became clerk and master of the chancery court, then clerk of supreme court, switching off finally to go in the banking business. It was John Inman, it seems, who was responsible for his sudden turn to the coal and iron business. Mr. Inman invited Mr. Baxter to go up with him on an inspection tour of Big Mountain, and they liked the looks of the place. Colonel Robert C. Looney, who then held an option on the purchase of the Tennessee Company stock, wished to sell his stock to Inman. Returning to Nashville the men held session at the Maxwell House. This was the time that Colonel Enoch Ensley, hearing of the business through Colonel Looney, hastened up from Memphis, all agog to get in such a big deal, only to find he was too late. Thoroughly angry he boarded the next train for Birmingham, Alabama, where, as has been already related, he made history with the first million dollar deal on record in that State, got him a coal mine of his own, and formed the Pratt Coal and Iron Company.

When the preliminaries of the Tennessee deal were concluded, Inman started in at once on a complete reorganization of the little company that had already been so frequently reorganized that its original lines were all but obliterated. This time, however, the reorganization took place "with a view to its expansion and development." Mr. Inman appointed Mr. Baxter president ad interim, "until," Mr. Baxter said, "he could look about and decide on someone better acquainted than I was with the coal business." At length he selected James C. Warner, then acting as superintendent and manager of the company, and made him president, while Mr. Baxter was appointed vice-president, and Colonel Shook, general manager. Negotiations looking to the trade of the South Pittsburg properties were commenced.

This property of the Cleveland iron-masters acquired, as has been related, in the early eighteen-seventies, by James Bowron, Sr., for the Southern States Coal, Iron, and Land Company, Limited, of England, had come to be a considerable business by 1881, but, just at this particular juncture, it had stripped itself of working capital and was on the verge of bankruptcy. In the first place, the town, the mines, and the furnace plant and shops had been constructed, regardless of cost, permanence being the main object. The old Ally farm was laid out by Mr. Bowron into broad frontage lots, with streets and avenues, wide, curbed,

macadamized, and lined with trees. Drainage and sewerage systems were installed, as well as lighting and water works. Pleasant cottages and residences, each with its attendant garden plot and orchard close, were erected, and a schoolhouse was built. All that, at a time too early in the century for "model towns," too English in style for the Tennessee backwoods, too ideal for appreciation, had been done at excessive cost. Machinery such as was used at Thornaby itself was imported at heavy cost, with heavy customs and freight charges; for instance, a movable steam crane of the Appleby brothers make was imported, when for the Sequatchie Valley a common derrick and a few good Tennessee mules had served the purpose and kept the business off the rocks. It was, in fact, the application of United States Steel Corporation principles without United States Steel Corporation capital, and of course, a perilous essay.

The Southern States Coal, Iron, and Land Company, Limited, was organized and officered by Thomas Whitwell, James Bowron, Sr., and James Bowron, Jr. Others of the officers and directors were: Henry F. Pease, coal owner, Darlington; William Barrett, managing director. Norton Iron Company, Limited, Stockton; Edwin Lucas Pease, M. P., William Henry Hewlett, Henry Barrett, iron and brass founder, London; Joshua Stagg Byers, director Stockton iron furnace, and William Ramwell.

The name of Thomas Whitwell is known in metallurgical circles all over the globe. Of a family of Quakers, as were the Bowrons, he was born at Kendal, in the year 1837. After serving his apprenticeship in the locomotive works of Robert Stephenson and Company at Newcastle on Tyne, he embarked independently and, with his brother, established the Thornaby iron works of Stockton. Blast furnaces, rolling mills, and machine shops were built up with extraordinary rapidity for an English operation. Trade was extended by Whitwell throughout the world, for he was connected with all commercial points of the continent, in the far Orient, in the United States, and the Dominion of Canada. The young iron-master invented all sorts and kinds of labor-saving devices in blast furnace construction, among them being the Whitwell stove, that eventually led the trade in every country where the production of raw iron reached the stage of marked commercial development. Whitwell was the founder of the Cleveland Institute of Engineers and its first president. He was the great authority of the world at that time

on blast furnace construction. Two boys, besides James Bowron, Jr., who, working under Whitwell, years later, became identified with blast furnace construction in Alabama, were Harry Hargreaves and James Shannon. Thomas Whitwell was the ideal of the working boys of all England. An incident is told of Mr. Whitwell by William Jones of Middlesbrough-on-Tees, which gives some idea of his character. He was in France just after the Franco-Prussian War, when all France lay prostrate and the spring was beating forlorn wings over the land, and there was dearth of seed and coming specter of famine. Thomas Whitwell, the English iron-master, rode on horseback across the stripped and blackened lands and distributed seed corn far and near to the families of the dead. He rode by night and he rode by day, and the last that his friend saw of him was as he disappeared into the gray of the Northern round, up into the gloom of the battlefield of Chateaudun.

Such was the man who led the young company whose holdings in the State of Tennessee now belong to the Tennessee Coal, Iron, and Railroad Company.

James Bowron, Sr., the originator of the Southern States Coal, Iron, and Land Company, while neither an iron-master nor a mining man in the literal sense of the word, was something of a metallurgist, a chemist, and a geologist, and a practical observer, informed as only the traveled and scholarly Englishman of means is informed. He was born in 1816 at the Quaker settlement of Darlington, England, his family treading back to the North Riding of Yorkshire.[1] His father had been a friend and associate of Edward Pease who, with George Stephenson, constructed the first railroad in the world — the Stockton and Dar-

[1] The original progenitor of the Bowron family was a miller dating from William the Conqueror's day. A descendant of his fought at Agincourt, and was given a coat of arms depicting a bar of mill iron on a black and silver shield in memory of the sturdy miller. This coat of arms is held to-day by the American branch of the family, as by their English cousins. Another historical incident well held in the Bowron family, and not generally known outside, concerned that member who made Quakers of them all. According to the Records of the Society of Friends, John Bowron was born 1627, died 1704. The memoir speaks of his convincement by George Fox and James Taylor, about the year 1653, and of his journey to Scotland about 1656, "from whence he sailed to Barbadoes, and from thence had long and perilous passage of thirteen weeks to England. For five weeks they were reduced to one biscuit and one pint of water, each, daily. On reaching England, John Bowron met with a message from the Lord to Richard Cromwell, and warned him of the day of the Lord. He then appears to have spent part of his days in prison. He desired his son, Henry Bowron, to go to the Meeting and acquaint Friends that his days were nearly spent."

lington Railroad. A vivid recollection of James Bowron himself was the public opening of this historic railroad, which he had attended as a little boy, August 25, 1825. The boy started in business with a firm of wholesale groceries, and eventually became interested in a number of big commercial and manufacturing, mining, and railroading enterprises. Out of his glass bottle manufactory at Stockton-on-Tees he realized a comfortable fortune, and retiring, took up his residence with his family in London.

His son, James Bowron, Jr., was born November 16, 1844, at Stockton-on-Tees, at one end of the historic railroad whose beginning his father had seen. He first attended a Quaker dame's school, "for little boys perfectly good," as he laughingly said. When fourteen years old he went to work as office boy in the Tees glass works owned by his father. He studied at night and worked up quickly through the various grades — junior clerk, shipping clerk, timekeeper, paymaster, and accountant. Before he was eighteen years old he was made general manager of the glass works at Middlesbrough, in which the Tees glass works owned half interest. When the two were merged into a stock company under the Tees Bottle Company, James Bowron, Jr., became secretary and treasurer of the concern, and at the same time acted as auditor of the Forcett Railway Company and the Forcett Limestone Company, two of the enterprises set on foot by his father. About this same time he became actively identified with the Young Men's Christian Association in Stockton. The honorary secretary of this Y. M. C. A. was the iron-master, Thomas Whitwell. For young Bowron, who was an omnivorous reader and mentally energetic out of common, Mr. Whitwell came to have marked interest and close friendship.

At length young Mr. Bowron assumed charge of the glass works, from which his father had retired, and in addition was auditor of the Tyne Chemical Company. He visited France, Germany, and Belgium in the interests of his company, and there was no historic spot in his own country that he did not come to know, stock and stone. In the year 1870 his marriage to Ada Louisa Barrett, daughter of the president of the Norton iron works, took place. Mr. Bowron established his home on the seacoast at Red Car, going to and from his office daily. Through his father-in-law, Mr. Barrett, he became interested in the iron business in a mercantile way, and, in 1872, organized with his

brother, Joseph Bowron, a general mercantile establishment with headquarters at Stockton-on-Tees and at Carthagena, Spain. He visited Spain frequently in pursuance of his business. Meanwhile, keeping up his other interests, he frequently ran up to London to see his father. William Barrett and Thomas Whitwell used occasionally to meet at the London home of James Bowron, Sr., and frequently American tourists were also guests. Talk gradually drifted to the States. Mr. Bowron, Sr., took up the study of North America with his customary vim. Maps of every section of the United States soon crammed the London house. The social evenings gradually evolved into business meetings, resulting at length in the formation of the company known as the Southern States Coal, Iron, and Land Company, Limited.

To James Bowron, Sr., was assigned the task that had by this time become his heart's desire, to "explore" the United States of America. The bulk of his own capital he put into the undertaking and started forth buoyant for "the States." On his first trip he did not locate just the mineral properties he was looking for, and, on his second trip (1874) the State of Tennessee became his main objective point. The little business then being done at Tracy City seemed very promising from Colonel Colyar's newspaper accounts as they were read over seas, and here Mr. Bowron determined to pitch camp and give minute investigation. His visit to J. C. Warner and Colonel Shook had been detailed, as well as his final selection of the mineral holdings and town site for his company.

In the summer of 1877, James Bowron, Jr., at Thomas Whitwell's request and at offer of a large salary, severed his business interests in England and in Spain, and left with his family, and a small retinue of industrial workers for the American wilderness, where they joined Mr. Bowron, Sr., and young Bowron became assistant general manager. Thomas Whitwell himself also came over in that same year to inspect the properties.[1]

[1] Occasional entertainments brightened the South Pittsburg life from time to time. The *Jasper Herald* records one of these "Social evenings," as follows: "The officers of the Southern States Coal, Iron, and Land Company, at South Pittsburg, gave an entertainment at their new hotel, on last Tuesday evening, which it was our good pleasure to attend. Posters had been printed announcing the fact, and early in the evening the citizens of the vicinity, as well as quite a number from Jasper and Ebenezer, began to assemble, notwithstanding the prospect was good for a wet and disagreeable night; but the clouds soon passed away, and the moon came out in all her splendor, making it one of the most delightful

Actual working operations had not up to 1877 been inaugurated owing to the big plan of construction work. An immense fortune had been put in the place and funds in the English company's treasury were now at ebb tide and the Cleveland ironmasters began to sight the specter of Scylla and Charybdis along the river Tennessee.

Worn out with the burden of the new labors, the new perils and uncertainties, and all of his big hopes seeming to be but fleeting shadows, the elder Bowron died, late in the summer of this year, 1877. Practically the whole of his capital, and, indeed, his every dream were buried in South Pittsburg.

The directors of the Southern States Coal, Iron, and Land Company cabled his son to assume the management. Said James Bowron, Jr., speaking of this, "I knew nothing of what

and pleasant nights of the season. The guests enjoyed themselves in social conversation on the portico and in the front yard until the lamps were lighted, when all were invited into the hall, where we were entertained by readings from Byron's and Dickens' works, instrumental music, and a dissertation on Woman's Rights, by the indefatigable, irrepressible, and inimitable Frank R. Leavett, Esq. Mr. Bowron, Jr., read The Battle of Waterloo. 'There was a sound of revelry by night,' etc.

"We have often heard this piece read, but never in such a splendid and faultless manner as it was read by Mr. B. Next was music by the Ebenezer String Band, which was very fine. After a few minutes' intermission, Mr. Amos gave a reading from Dickens' works, which was entertaining and amusing and well done. The band then again enlivened the occasion with several fine pieces, after which Mr. Bowron gave us Henry of Navarre, which was listened to attentively by the guests. Miss Kelly then sang for us, 'He has the money too,' which was done in a faultless manner; and at the conclusion of which, supper was announced. We neglected to state that that prince of hotel keepers, Mr. Reed, and his accomplished daughter, were running the culinary department, and the mere announcement of this fact is evidence enough that the supper was first-class in every respect. The doors of the dining-room were thrown open, and the guests invited to walk in and be seated around the well-supplied tables, which they did, and with attentive waiters at their elbows, of course ample justice was done to the viands. After supper was over the guests repaired to the front yard to witness the fireworks which were being displayed in good earnest; skyrockets ascending higher and higher until they seemed to be 'little stars sailing around the moon.' The fireworks closing about 11 o'clock, and the train having arrived on its return from Chattanooga, we, together with a portion of the guests, took passage for Jasper, where we arrived about 12 P. M. longing to be 'put in our little bed.' The bard, together with a majority of those present remained, and, clearing out the dining-room, kept time to music in the mazy dance until the wee small hours of morning. The whole affair was one of the most pleasant and interesting ones that we have ever attended. Messrs. Bowron, Amos, and Leavett did all in their power to make each and every one pleasant and comfortable, and they deserve, and have the thanks and well wishes of all who were present, for their generous hospitality and untiring efforts to please and entertain all. We had forgotten that it was leap year until reminded of the fact by the attentions shown our modest and unassuming friend, Al Lancaster, by one of the worthy ladies."

I was now called upon to do. Mining, metallurgy, coal, iron, coke manufacture, pig iron making, blast furnace construction, building of foundries, machine shops, lime kilns, fire-brick works, —I had it all to learn. I had to learn how to make and develop a town, sell lots and houses, get and locate settlers and workmen, learn a thousand things I had never tackled before." Nevertheless, he went straight ahead against the heavy odds, his friend, Thomas Whitwell, though five thousand miles away, holding out a hand of encouragement.

Scarcely a year after the death of its founder, James Bowron, Sr., the little English community, lonely in the Sequatchie Valley, was struck with grief upon receiving the cabled news, August 5, 1878, of Thomas Whitwell's death, in a gas explosion at the Thornaby iron works. This, like the tragedy of Captain Bill Jones' death, some time later, was a shock to the iron world of both continents.

For South Pittsburg, too, it meant not only the loss of its best friend but practically dislocation of the home office. Foreseeing events, James Bowron endeavored to effect a consolidation with the Tennessee Coal and Iron Company at terms advantageous to his own company, but his directors would not then hear of it. Four years of struggle ensued, with a hard fight to make good. Expenses piled up in spite of the economical principles of the new management. The English directors became profoundly discouraged. Finally they were for letting it go for any price. It was at this point that Nat Baxter, Jr., leaped into the breach, consummating his first coal and iron trade. On February 1, 1882, the Southern States Coal, Iron, and Land Company, Limited, was acquired by the Tennessee Coal and Iron Company for the purchase price of $700,000 of stock and $700,000 in bonds, secured by a mortgage on the property purchased. The capital stock of the Tennessee Company was then increased to $3,000,000. This business, like old Bilbo's $50,000 trade thirty years before, became the talk of Nashville. Now, instead of the Southern States Coal, Iron, and Land Company, Limited, acquiring the Tennessee Coal and Iron Company, the Tennessee Company got the English concern for paper alone. By this deal the Tennessee Company thus became the largest coal and iron property in the State of Tennessee, in 1882.

James Bowron, Jr., then entered the services of the Tennessee Coal and Iron Company with which company he was to be

identified for the ensuing twenty years, first as secretary and treasurer and eventually as vice-president.

During the progress of the two or three years following the deal with Southern States Company the Tennessee Company settled down to steady business, having in hand now three big divisions — Tracy City, Cowan, and South Pittsburg. The Tracy City coal mines were the most extensive in Tennessee, having a daily output for 1250 tons. The company continued further to develop their properties. They increased the output at Tracy City, finished up and put in blast the second furnace at South Pittsburg, relaid the old railroad line with steel rails, secured funds for the construction of a railroad from Victoria to Inman, Tennessee, and opened up at that point mines of fossiliferous ore which was then used in both Cowan and South Pittsburg furnaces. The Tennessee securities, with Inman at the base, now began to attract attention on the New York Stock Exchange. Then and there the game began that had no let up, foul or fair, until the United States Steel Corporation lifted the company out of the reach of the bulls and bears, in 1907, twenty-five years later. James C. Warner was still acting president [1] and Nat

[1] In addition to managing the Tennessee Company, President Warner was interested in various other mining and iron-making enterprises in Tennessee and Georgia. His health began to fail under the incessant strain of work and in October, 1885, he resigned. His letter to the directors of the T. C. I. is as follows: "Gentlemen — Continued ill-health unfits me for the duties required and induces me to resign the office of president of your company, to take effect at the earliest day possible. I regret the necessity that forces me to sever my connection with so pleasant an association, and from whom I have always received the utmost kindness and consideration."

In accepting the resignation of Mr. Warner, the directors passed the following resolution:

"We part from our president, James C. Warner, with a feeling far beyond the ordinary regrets of severing business relations. The company over which he has so long presided was the initial step in the great business of mining coal, burning coke, and making iron in Tennessee, and its steady growth from a small beginning to its present magnitude is due in a great measure to Mr. Warner, who was first for many years its business manager and more recently its president.

"While we are sad over the failing health of Mr. Warner, which makes it necessary for him to retire, we separate from him with the pleasing consciousness that every member of the Board will carry with him through life the consciousness that in the business affairs of life he was as brave and trustworthy as in social life he is gentle and lovable."

Directly following President Warner's resignation Nat Baxter, Jr., succeeded to the office. Colonel Shook continued as general manager until early in 1886, when, at the annual election of officers W. M. Duncan secured control of the majority of the Tennessee Company proxies and appointed Mr. Bowron general manager, although retaining Mr. Baxter as president. Mr. Baxter eventually joined Colonel Shook and Mr. Hillman in securing Inman's backing in the scheme to acquire Colonel Ensley's Alabama hold-

Baxter, Jr., Colonel Shook, and Mr. Bowron were his associate officers. When Colonel Shook ran down from Tracy City into Nashville, he occasionally brought with him young George B. McCormack.

"Looks as if Shook's putting on a good deal of side," President Nat Baxter observed, "coming here out of the woods with a secretary and stenographer! He's got so big he don't want to write his own letters, eh! — must dictate 'em!"

Pretty soon it came to pass, however, that the colonel could scarcely get McCormack away from Baxter and Bowron's dictations. "I tell you," said the colonel, "McCormack was an expert!"

By this time the young man was indeed beginning to be a marked figure. In the first place, he had obtained such a grip on the details of the company's business as was not held by any other one individual. He spent practically the whole of his days in the company's service. He made a habit of looking up ways and means employed elsewhere, and adopting any little device he read about or devised himself that improved and modernized things at a minimum of cost, and that would show up results. And he never said anything about it, but just went ahead and put in the new ways right and left, wherever new ways were needed. All the while he kept working steadily, a little at a time on lines he was interested in, and that would serve to make him of more practical use to the business. He studied geology, metallurgy, physics, and chemistry, and even took a brief excursion into mining, civil, and railroad engineering. He was after facts, just plain, straight, every-day facts. There was not a single working feature of the company's operations, or any important facts of a social or economic, or political, phase or condition which young McCormack did not have on fingers' ends, nor, which is more to the point, was there any man in the company, or concerned with the company, whose measure he did not have.

"The main thing about McCormack is his common sense," is the inevitable comment on the man. And there indeed is the meat of him; a fine good sense, — better in the coal, iron, and steel business, and in world-making everywhere, — than all the fires of genius. Applied at this period of George B. McCormack's

ings, and make a trade with the Tennessee Company. The upshot was the entrance of the T. C. I. into the State of Alabama as described at the beginning of this chapter.

career, it began to breed in him those qualities of cool judgment, practical wisdom, and personal force which were to make him in later years the great captain of modern industrial Alabama. Then, as now, he was utterly above the region of petty confusions, jealousies, and excitements. That he carried a head on his rather slight shoulders — a head for statecraft indeed — began to be vaguely discerned at this early period of his interesting career. While vaguely discerned then, it is plainly apparent to-day, when, as president of the Alabama Coal Operators' Association, as president of the Pratt Consolidated Coal Company, as indeed as a business man of rare power and influence, he has come at last into his leadership.

CHAPTER XXIV

A SERIES OF LIVELY INCIDENTS IN THE BIRMINGHAM AND SHEFFIELD DISTRICTS 1887

Founding of the city of Ensley by Colonel Ensley. Records of Ensley Land Company. Sensational first sale. End of town boom. Colonel Shook introduces an accounting system at Pratt mines. "The fatal monkey wrench." Llewellyn Johns resigns. A young Pennsylvania Scotch engineer is recommended. Biographical sketch of Erskine Ramsay. Association of Erskine and Ramsay families with early coal history of Scotland and the United States. Specific details of daily life and work of a boy in the mining world of Pennsylvania. First engineering corps of Tennessee Company organized by young Ramsay. Improvements inaugurated by him. Introduction of coal washers, revolving dumps, and skip-cars. Meeting of International Association of Metallurgists and Mineralogists in Birmingham. Entrance of James Henderson. First steel-making experiment of Alabama. Sketch of Colonel J. W. Bush. Results of interesting experiment by Henderson Company. Erection of "The Big Four" at Ensley. Resignation of Colonel Ensley from presidency of T. C. I. Pioneer work of Walter Moore. Organization of Lady Ensley Coal, Iron, and Railroad Company. Moore and Ensley open up Sheffield District. Connection of certain properties of Pratt Consolidated Coal Company and Sloss-Sheffield Steel and Iron Company with operations of Moore and Ensley. Development of Tennessee Valley counties. Beginning of town of Sheffield. Biographical sketch of Alfred H. Moses. The Sheffield Land, Iron, and Coal Company formed. Ways and means of building up the town. Alabama and Tennessee Iron and Coal Company concentrates in Colbert County. Horace Ware's predictions for Sheffield. William Garrott Brown's account of boom days. Consolidation of Sheffield and Birmingham Coal, Iron, and Railroad Company. Group of present-day promoters. Town of Florence awakes from long sleep. Organization of the Florence Land, Mining, and Manufacturing Company. Sketch of William B. Wood. Formation of Wood Furnace Company. John M. Norton's work. Activity of North Alabama Furnace, Foundry, and Land Company. Resurrection of Decatur. How Andrew Calhoun Frey "started the town going." Summary of important industries located at Decatur.

THE Tennessee Company was reorganized in 1886, directly following the Alabama deal, and a new board of officers was elected. Colonel Enoch Ensley now became president of the company; T. T. Hillman, first vice-president; Colonel A. M. Shook, second vice-president; Nat Baxter, Jr., chairman of executive committee; James Bowron, secretary and treasurer; and young George B. McCormack, auditor. The main office remained, however, in Nashville, not

being transferred to Birmingham until several years later, when the Aldrich and DeBardeleben properties were acquired.

The first event of signal importance to the company, and to the industrial records of Alabama following the big trade, was the founding by Colonel Ensley of the city of Ensley.

It was shortly after DeBardeleben's new-born project of Bessemer had electrified the Birmingham District that Colonel Ensley succeeded in getting the Tennessee Company to convey to the Ensley Land Company (organized by Colonel Ensley) a tract of 4,000 acres of land, excluding the minerals. This was done by the Tennessee Company on account of the large interest in their securities personally owned by President Ensley. The land was rough and sterile, full of scrubby pines and blackjack. It lay high six miles due west of Birmingham, directly upon the borders of the Pratt Coal Field. One day, just after the conveyance of the 4,000 acres, Colonel Ensley and Colonel Shook were walking through the piney woods about there.

"Ensley turned to me," says Colonel Shook, "and he said, 'Shook, I 'm going to build a town in these woods. Right where you are standing; that 's the center of it. I 'm going to build a town, Shook, that 'll be like a brindle cow suckling herself, and I 'm going to call that town Ensley.' We walked on further, and Ensley continued, 'I intend to fill this valley, from the foot of the chert ridge yonder to the Pratt Railroad, with manufacturing plants. I 'm going to build four big blast furnaces and a steel plant. The whole of this chert ridge I 'll use for residences, and the day the work is begun I 'll agree to pay $200 a foot for this corner lot, and here I will build the Bank of Ensley.' "

The colonel once full of his idea, there was no holding him, and work on the building of the city of Ensley was then and there commenced. The following excerpts are from an article contributed by Colonel Shook to Crawford Perkins' "Industrial History of Ensley":

"The Ensley Land Company was originally capitalized at $10,000,000, fifty-one per cent of which was retained by the Tennessee Coal, Iron, and Railroad Company, and the remaining forty-nine per cent offered to the Tennessee Coal and Iron stockholders, in proportion to their respective holdings at ten cents on the dollar. As soon as this was done, the plan and scope was made public. This was that the proceeds of the sale of every lot should

be used by the company in the development of the property, by establishing manufactures and aiding manufacturers who might be induced to come there. John H. Inman of New York, being the largest stockholder of the Tennessee Company, by reason of this fact became the largest stockholder of the Ensley Land Company. He authorized Doak Mudd, a broker of Birmingham, to sell $100,000 of the Ensley Land Company stock. This was very soon after the organization and before any stock was issued or ready to issue. Mudd advertised that he would sell the stock at his office on a certain evening. When the time arrived, a great crowd assembled, wanting to buy the stock. My recollection of the first sale was at sixty cents on the dollar, and in a few minutes $100,000 had been sold, some of it selling as high as ninety cents on the dollar, men tearing each others' clothes to get in and get the stock at this price. In a few days reaction set in, and the buyers began to realize that they had been precipitate and premature. People who had agreed to buy the stock were trying to sell it for less than they had paid for it, and in less than a month the stock had gone back to fifteen and twenty cents on the dollar. My recollection is that none of the parties who had agreed to buy the stock at this fabulous price were ever required to take and pay for it."

The Jefferson County Record contains the following facts: "That the petition to incorporate the Ensley Land Company was filed December 7, 1886, by Enoch Ensley, Thomas D. Radcliffe, T. T. Hillman, and William A. Walker. That its purpose and nature were to buy and sell lands, survey and improve same, and lay off into streets, lots, parks, and alleys; to construct gas, electric, and other illuminative works, and manufacture and sell products and results thereof; to construct pleasure resorts; to quarry stone; to manufacture pig iron, steel, and other articles which can be made with coal, coke, or other fuel, out of iron ore or metals, or from wood, stone, earth, cotton, iron, steel, either alone or in conjunction with any other material; to buy, use, or sell same; to erect dwellings, stores, shops, and all machinery that may be necessary to carry on such business; to build and operate tramways; to carry on stores and necessary mercantile establishments; to construct and operate water works, and construct and maintain reservoirs, conduits, canals, and pipes. The capital stock of $10,000,000 was divided into $100 shares. The books of subscription were opened December 8 at the office of Hewitt, Walker, and Porter. The directors elected were E. Ensley, T. T. Hillman, W. N. Duncan, J. H. Inman, and Nat Baxter, Jr., while Thomas D. Radcliffe was elected secretary and treasurer, and Enoch Ensley president."

Colonel Ensley had the tract of land surveyed, the whole place plotted and laid out, sewerage system installed, and a hotel started. He then fixed the day of sale and advertised the prop-

erty far and wide, just as Colonel Powell had done with Birmingham. However, Colonel Ensley changed his mind about the sale day, deciding at the last minute to wait until his hotel was done. "Altogether," observes Colonel Shook, "more than a year was spent in doing preliminary work, and after the hotel had been finished and opened for more than twelve months, it was Colonel Ensley's boast that there was no other hotel in the world like it; that it had been open more than a year and had never taken in a dollar. Soon after this Colonel Ensley was called to the bedside of his sick wife, who was in Europe, and matters remained dormant until his return, as he would not agree for any one else to attempt to manage in his absence. After the death of Mrs. Ensley, Colonel Ensley came back to look after the Ensley Land Company, but things had changed. . . .

"Again the sale of lots was advertised and postponed. The price of pig iron, which was and is our barometer, went down and continued to go down until it looked as if there was no bottom. . . . The Ensley Land Company had incurred a large debt, and had no way to pay it except by the sale of lots, and not a lot had been sold. Tired creditors became impatient, and the first judgment for $10,000 was obtained against the Ensley Land Company and others quickly followed. No lots were sold until the reorganization of the company, in 1898, after it had passed through all of its trials, receivership, and the entire property having been sold at sheriff's sale and bid in for $16,000 by the estate of James C. Warner of Nashville, Tennessee, who held a judgment against it for practically that amount."

The property was afterwards acquired through others for the Ensley Land Company.

Meanwhile, development work at the mines went on in a more or less haphazard style. The circumstances under which the Tennessee Company chanced to get its first Pennsylvania mining engineer about this time are even now frequently referred to. It came out of the introduction of an accounting system by Colonel Shook. During Colonel Ensley's absence abroad Colonel Shook traveled back and forth between Nashville and Birmingham, looking to the Alabama end of affairs.

One afternoon at Pratt mines he was in the commissary where the mine supplies were also kept, and noticed that the superintendents, foremen, and all the various workmen, dropped in and helped themselves just about as they pleased. "D' ye mean

to say," said Colonel Shook, going up to the clerk, "that no requisition for any of this stuff is ever made, — no account kept?"

"Colonel Ensley don't require it, sir," replied the clerk.

Now Colonel Shook had been in his younger days fairly reprehensible himself on this commissary proposition, but, on coming into Alabama, he had reformed. As was natural with a Tennesseean, the moment he reformed himself he was not easy in his mind until every other man had done the same. "Whoever heard," said he, "of running a commissary like this?" And he gave orders on the spot, reforming the situation. Now, as it happened, no sooner had the novel and drastic measure been issued than the company's mining engineer, Llewellyn Johns, humming an old Welsh tune, sauntered gay and easy into the commissary. He helped himself, as was the custom, and took up a monkey wrench. "Here's for Laura," he cried, and, not stopping a note of his happy tune, started out.

"Hey!" cried the clerk, "put that monkey wrench down! Colonel Shook has just issued an order that a requisition is to be made first at the office before anything is let out of here any more."

Llewellyn Johns stood stock still in his tracks. "It's Colonel Sh — Shook's orders," stuttered the clerk.

"Colonel Shook be d—d, then! I keep this monkey wrench."

At this juncture Colonel Shook spoke up: "Johns," said he, "you 'll have to write out an order to the local headquarters when you want anything after this, and every one else will. Too loose ends about here, and I've decided to change the system. You make out a written order stating that monkey wrench is for use for Laura Ensley Slope No. 1, and you 'll have no trouble in getting it. We've got to fix things so as some account can be kept of something around here some of the time."

"So you begin on me and this monkey wrench," cried Johns. "You tell me, who has made these Pratt mines, to put in writing that I need a good-for-nothing monkey wrench, eh?" . . .

"If you want a tack or a match it's got to be written down," declared the colonel conclusively.

"I 'll resign," cried the Welsh engineer, "before I do it." And resign he did without more ado.

News of the fracas traveled fast to Nashville. Now, in those times, mining engineers were few and far between in Alabama.

T. T. Hillman wrote up to Pennsylvania to J. K. Taggart, then manager of the Connellsville Coke and Iron Company plants in Pennsylvania, and asked him to suggest a man for them. Mr. Taggart replied as follows:

LEISENRING, Pa., March 9, 1887.

Mr. T. T. HILLMAN,

President Alice Furnace, Birmingham, Alabama.

DEAR SIR, — In your letter of 14th you asked me to suggest a man as superintendent and engineer for your mines. I heartily recommend Erskine Ramsay (Scotch) to fill the position, and although but twenty-two years of age, he is one of the best superintendents in the Coke region, and no man in the region is a better mining engineer. Erskine Ramsay is a son of Robert Ramsay, superintendent of all of Frick Company's mines. Erskine Ramsay is a graduate of St. Vincent College, 1st in his class. Robert Ramsay was superintendent of Shafton Coal Company, bought out by Westmoreland Coal Company, then superintendent for Carnegie Brothers, and when Carnegie and Frick merged their interests, became general mine superintendent of the H. C. Frick Coke Company. During this time Erskine was working for his father all the time, and under Frick Company was superintendent of the Moorewood mines, with its five hundred and seventy-one coke ovens. Erskine Ramsay, although but twenty-two, has had more practical experience than many superintendents much older, and all his life has been employed by some of the most progressive companies in the country. If you desire he will visit your place, and if you can arrive at a bargain, he is willing to go in on trial for any time you may name. I know his employers would be very loth to dispense with his services, yet, yours being a new country and to be built up, he is anxious to take the chances. Kindly let me know your views in the matter.

Yours truly,
(Signed) J. K. TAGGART, S. & E.

On receipt of this letter Mr. Hillman telegraphed Mr. Taggart, asking that the young engineer come on for a conference, and, by a later wire, to stop over in Nashville en route to Birmingham, to confer with the Tennessee Company officers.

Mr. Ramsay says in this connection: "I left Pittsburg on March 31 to look over the situation and see if I wanted the place and they wanted me. At that time I 'd never been outside the State of Pennsylvania, and I recollect it was the first time in my life I 'd been aboard a Pullman car. I guess I was pretty green, and they all put me through a sort of a civil service

examination there in Nashville, — Baxter, Hillman, Shook, Bowron, and McCormack, too."

As a matter of fact, the Tennessee Company officials at the Nashville office quizzed the young Scotch engineer unmercifully. He gave an account of his work, minute and precise. He had had, indeed, an extraordinary amount of practical experience for a young man of his age. When his recital was over the men in the office looked at one another and then they looked at him. "How old did you say you are, sir?" asked Colonel Shook.

Erskine Ramsay replied briefly, with the date of his birth.

"I figure out that makes you twenty-two years old, then," observed Mr. Bowron.

"What I 'm figuring on," broke in President Nat Baxter, Jr., "is if you 've done all that you say, where 'd any time come in for you to go to school?"

"Maybe," interposed Mr. Hillman, "maybe he did n't really go to school!"

"Yes," Mr. Ramsay declares he said at the time, "yes, I did!" At any rate, the young Scotch engineer was fortunate in getting away from that office with his scalp-lock intact. He says to-day: "That was, for a fact, the most trying ordeal I ever went through in my life, and I was glad enough to take the next train for Birmingham and the Pratt mines."

At Pratt mines the superintendent, Colonel Charles Pollard Ball, and the Welsh engineer, Llewellyn Johns, who had by this time signed his contract with the DeBardeleben Coal and Iron Company, met young Erskine Ramsay, and showed him over the mines. After spending about a week, Mr. Ramsay returned to Pennsylvania, "not much in the notion of going to Alabama." He had an interview with Henry Clay Frick, in which Mr. Frick said: "Take the place, Erskine. They offer you more than we can pay you at this time, but if you don't like the place come back, and we will always have something for you to do." He decided to accept the position, and returned to Birmingham to take charge April 15, 1887, as mine superintendent and engineer of the Pratt mines of the Tennessee Company.

Erskine Ramsay was born September 24, 1864, at Six Mile Ferry, a little coal mining suburb of Pittsburg, Pennsylvania, bordering the Monongahela River, which is now the lower end of the town Homestead. His father was Robert Ramsay, chief

among the great mining engineers of Pennsylvania, and his mother was Janet Erskine.

There are in the records of both the Erskine and the Ramsay families certain qualities of much interest. Their history has root in the pioneer coal mines of Scotland. For over two hundred years their names were associated in workman's capacity with the Scotch coal industry. There was an Erskine identified with the iron industry of the American colonies who also came from Dunfermline, and who worked in New Jersey several years, becoming the first surveyor-general and geographer-in-chief of the Continental Army. For the past half century the name of Ramsay has been associated with the upbuilding of the coal industry of Pennsylvania. In fact, up in the Connellsville region, where for so many years one Ramsay successively followed another in the management of the Southwest Coal and Coke Company, they are frequently referred to as "The Royal Family."

Erskine Ramsay's grandfather had been a coal miner all his life, practically, having started in the mines when a boy. Before emigrating to America he sank several shafts in coal mines of Scotland. He settled permanently in Pennsylvania on his second trip in 1862, at Larimer, Westmoreland County, where he accumulated a moderate amount of property. He died there in the year 1885, well regarded for his sterling qualities and rugged honesty. His four boys, Robert, William, Morris, and George, and their sons, take high place in the industrial progress of the State of Pennsylvania.

As it may be but holding a candle to daylight, as Scott's saying goes, to observe, the turn for mining and mechanical engineering was native-born in Erskine Ramsay. And not only was it a matter of inheritance; it was fostered by every condition of association and environment. Erskine Ramsay's mother relates an incident how, "when no more than some three years old, Erskine sank a tiny shaft in the front yard, devised a cage and a little tipple, and got out his coal."

The Ramsay family left Six Mile Ferry in 1865 and moved to Shafton, Westmoreland County, where the boy was entered in the public schools of that community. This mining county was one of the earliest coal mining centers of western Pennsylvania, and produces more coal to-day than any other county in the United States, and approximately twice as much as the entire State of Alabama. Shafton is a small mining town on the

main line of the Pennsylvania Railroad, twenty-two miles east of Pittsburg.[1]

Robert Ramsay was a great believer in keeping his boys at work when there was no school. He used to take his little son Erskine with him whenever he had surveying in the mines or on the outside to do. His brother, Morris, one of the early mine bosses at Shafton, also made a habit of taking Erskine with him when on his rounds through the mines. Before the boy was ten years old he had a certain amount of knowledge of the work, and a deep-seated desire to learn more.

When he was no more than eleven or twelve years old he began to work in the coal mines at Shafton: first in the company's car shops, blacksmith shops, and machine shops; then he fired the boilers, ran the shaft-hoisting machine and the mine pumps; served as weighman on the tipple; looked after the shipments of coal; kept the pay roll and ran a co-operative store, two and a half years, up to 1881. He rarely took a holiday, and during the noon hour each day for several years his Uncle Morris would coach him in mathematics and other studies. He went to day school during his last year at Shafton. "Every morning at five o'clock," he says, "I was called to go to work in the machine shop. It was lathe work generally, and I would stop in time to get breakfast, and then go to school. I would earn twenty-five to thirty dollars a month. At that time night schools were quite common, and when working at any job about the mines, I had usually been to some one of them; so, regardless of whether I was working at the mines or not, I was generally engaged in some line of study. During one of the terms at the Shafton School, I recall, I had the job of janitor for our room, at two dollars per month."

In 1881 the boy worked in the office of the Carnegie Company's Monastery Mines and Coke Works, of which his father had charge. He kept the pay roll, checked bills, and served as

[1] One of the first mines in western Pennsylvania was located here; the shaft mine of the Shafton Coal Company, a concern owned in Philadelphia. Irwin, the largest town in that part of Westmoreland County, was the center of the celebrated Irwin Gas Coal field. The mines here were opened immediately after the completion of the Pennsylvania Railroad to Pittsburg, in the eighteen-fifties, by Tom Scott, one time president of the Pennsylvania Railroad. In the early days of these mines the slack produced was a drug on the market. One of Andrew Carnegie's first industrial enterprises was the erection of the Larimer Coke Works to utilize this slack, which he bought from the nearby mines at a low price. The coke was used for years at the Carnegie Lucy Furnaces at Pittsburg.

cashier. He then became assistant machinist and master mechanic, having in charge all the machinery in and about the Monastery mines; the boilers, hoisting, and stationary engines, pumps, coal crushers, and coal washers. At the same time he accomplished his college work. He entered the Benedictine College of Westmoreland, St. Vincent College, and graduated first in his class, June 27, 1883. Then began his genuine professional career; for it was in this year he became superintendent of the Frick Company's Monastery Mines and Coke Works. And he stayed right with his job, close as a fire department man to his engines and wagons. He slept in a room which he had fitted up adjoining his office. He watched his ovens closely to see that they were charged with every pound of coal they would coke. As a result, the ovens produced one month an average 4.06 tons of coke per oven drawn. When these figures were gotten up in the city office (Pittsburg) Mr. Frick said there was some mistake and ordered them gone over again. They were found to be correct. The next month the output was even better, running up to 4.17 tons. Never before had any Frick oven produced as much as four tons of coke.

During the time young Ramsay was superintendent of this plant, which comprised two hundred and eight ovens, he also did at night and at odd times all of the surveying and engineering needed and kept up the mine maps. He was the youngest superintendent the Pennsylvania coke region had ever had up to that time, or has had since. The plant was remotely located from the general office and the other works, and, as a result, the young man was, to a great extent, thrown on his own resources. His life was isolated. The world was to him a series of coal mines; the entire horizon stubborned with batteries of coke ovens. In the early part of 1885 Mr. Frick suggested to Erskine's father that the young man be put in charge of the Morewood Coke Company, Limited, as general superintendent. Personally, the boy was not in favor of the change, as Morewood was one of the largest propositions in the coke region, and he feared to take on such additional responsibilities. However, Henry Clay Frick thought otherwise, and on February 4, 1885, Erskine Ramsay became general superintendent of the Morewood Company. Mr. Frick was then president and owned a part of the total capital stock, the remainder being owned by constituent companies of the later organized Illinois Steel Company.

When Emmet A. Upstill resigned as superintendent of the Southwest Coal Company at Tarr, Pennsylvania, Ramsay was put in charge of its properties in addition to the Morewood Company. Sometime afterwards the Red Top mines near Tarr were purchased from S. Dillinger and Sons, and these were also included under Ramsay's charge. Then the Morewood and Southwest companies and the Dillinger Works were consolidated under the name of the Southwest Coal and Coke Company, with Ramsay in general charge, reporting direct to Mr. Frick.

During the time he was in charge of this Southwest Company Mr. Carnegie and Mr. Frick were coming out from the Pittsburg office one evening en route to the East End. As they got off the Pennsylvania Railroad train at East Liberty, Mr. Carnegie, seeing a train of coke standing nearby, remarked on the beauty of the coke and the trimness of the way it was loaded. Mr. Frick offered to bet it was Frick coke, and, on climbing across the car to find the tag, discovered it was from " Morewood," one of the Southwest works. Erskine Ramsay had made quite a reputation on the good coke shipped from the Southwest works. He was so careful in loading it that some wag in the region remarked that he " whitewashed " it.

In October, 1886, Erskine Ramsay became assistant engineer for the H. C. Frick Coke Company. It was here that he had charge, under his father, of the construction of the celebrated Standard plant at Mt. Pleasant. Directly after its completion he entered the Alabama field.

When, in 1889, Andrew Carnegie paid his first visit to the Birmingham District, he wrote to Robert Ramsay, whom he had known as a boy in old Dunfermline: " I was very glad to meet your son Erskine in the South. He is going to be ' a credit to us a'."

During the fifteen years that Erskine Ramsay worked for the Tennessee Company he introduced improvements covering a wide range. His first step in the spring of 1887 was to organize the first engineering corps of the Tennessee Coal, Iron, and Railroad Company, and to make maps of the underground workings.

" Erskine Ramsay was a worker all right," one of the old furnacemen remarked; " there was n't a square inch of old Pratt he did n't carry his transit over. With pants up to his knees, down into the mines he 'd go, and get just as dirty as the rest

of us, — and dirtier, — though you would n't think it to see him nowadays in his patent leathers and all."

In the old days, owing to the lack of maps, the workings were not driven with much regularity and no pillars were drawn. The general condition of the plants was brought up gradually to a satisfactory state. Pillars were drawn systematically and the maximum amount of coal recovered. Shaking screens were installed and much of the output was put on the market as lump. The slack was washed and a coke produced much superior to the old article. The first coal washer at Pratt mines was erected at Shaft No. 1 in 1892. It was of the regular Robinson type, having a capacity of four hundred tons in ten hours. This washer was an English type and was brought to this country by Colonel Shook and Captain Chamberlain. The second plant at Pratt was built at Slope No. 2, with a capacity of six hundred tons in ten hours, and in its erection Mr. Ramsay introduced a number of improvements and additions on which he took out patents. This improved washer, which came to be known as the Ramsay-Robinson, proved to be a success and was peculiarly adapted to the Pratt coal. It may be said that to the successful washing of the Pratt coal, with the regular production of a superior grade of coke, was due much of the success met with later in the district in the production of basic pig iron, which made possible the manufacture of basic open-hearth steel. A great many of these washers were erected in Alabama, and most of them are running successfully to-day. The output of the old mines was in most cases increased and new mines were being acquired, — generally through consolidation with other companies, — and new ones opened.

The red ore mines of the Tennessee Company were at that period being worked under contract by Thomas Worthington, who was long associated in railroad construction work with Aldrich and DeBardeleben. It was Mr. Worthington who installed in 1895, at Spring Gap, the first skip-car or "gunboat" on Red Mountain. Erskine Ramsay designed and patented the revolvable dump employed for several years at the Smythe mine, one of the Ishcooda group. Speaking of the old days Mr. Ramsay said: "The Tennessee Company, as a rule, was short of cash, so the opening of new mines, rebuilding others, and addition of equipment was no easy matter, and to-day it is amusing to look back at some of the makeshifts which had to be resorted to. In

one case, for instance, I remember we bought a pair of discarded Corliss engines from an old Mississippi cotton mill, ran them through the (Linn Iron Works) shops, adding rope wheels. One of them still furnishes the power for an overhead, endless-rope haulage two and one-half miles long and delivers one thousand tons daily to the tipple. Second-hand boilers would also sometimes be bought; not that it was thought best to buy old ones, but for the reason that we did not have the money to get new ones."

The improvements Ramsay introduced, all told, covered a wide range, taking in the plan of the mine workings, the ventilations, — introducing the split system, — the tracks, and mechanical haulages; the style of mine cars and wheels, the plan of tipples, and, as mentioned, improved screens and washers.

At the time Mr. Ramsay assumed charge of the engineering end of Pratt mines, which were the only coal properties in Alabama owned by the Tennessee Coal Company, the daily output averaged from two thousand to twenty-five hundred tons. The annual output thus amounted to about six hundred thousand tons. One decade later the mines were producing, under the administration of Ramsay and McCormack, two and a third million tons annually.

On November 16, 1894, Erskine Ramsay received the following note from Mr. Baxter, president of the Tennessee Company:

NASHVILLE, TENN., NOV. 16, 1894.

ERSKINE RAMSAY, ESQ.,

Superintendent Pratt Mines.

MY DEAR SIR, — I hereby appoint you chief mining engineer of the company's property in Alabama, and vest you with the responsibility and charge of the technical management of the company's collieries and ore mines in that State, feeling confidence in the wise management of the trust reposed in you, and being assured that you will work in perfect harmony in its administration with Mr. McCormack, assistant general manager, whom I have also notified of your appointment.

Yours truly,

(Signed) N. BAXTER, Jr., *President.*

In addition to this newly-created position of chief engineer, Mr. Ramsay continued to fill his other two positions of mining engineer of the Pratt mines division and superintendent of the Pratt mines division until his appointment in November of 1895

by Mr. McCormack, in addition to chief engineer, as assistant to the general manager, with special charge of the Linn Iron Works department.

About the time of Mr. Ramsay's entrance into Alabama, and just a short while prior to the building of the Ensley furnaces, the International Association of Metallurgists and Mineralogists met in Birmingham. There were delegates not only from the various States, but also from England, France, Germany, and other foreign countries. An interesting event in the iron world eventually resulted from this meeting. Among the visitors was one James Henderson. This Mr. Henderson, it seems, had worked with the famous gun manufacturer, Krupp.

"He was a great traveler, a discoverer, and an inventor," says Colonel J. W. Bush of Birmingham, who was a member of the reception committee. "He owned a patent process for the manufacture of steel in the open hearth. It was generally supposed that steel could not be made from the grade of iron manufactured in the Birmingham District. Indeed, a member of the International Association, who was from Pittsburg, jokingly remarked that our iron contained so many impurities and was so brittle that it had to be shipped on sawdust to prevent its being broken. After several days' conversation with Mr. Henderson, I became thoroughly convinced that the manufacture of steel, the natural sequence of iron making, could be accomplished in Birmingham."

A few weeks after the departure of the visitors, Colonel Bush, G. W. West, John McCoy, Henry F. Wilson, and Colonel J. A. Montgomery took active measures and organized a company to demonstrate the Henderson process. Colonel Bush, the president of this company, a lawyer by profession, a Virginian by birth, was a graduate of William and Mary College. He had served with distinction in the Confederate army, first, as a member of Lee's rangers, then in the Ninth Cavalry as courier for General Lee. After the war he taught school and studied law. He settled in Alabama in the eighteen-sixties, and married Miss Sallie H. Evans of Mobile, a sister of the Southern author, Augusta Evans Wilson. After representing the Seventeenth District several years in the State Senate, Colonel Bush moved to Birmingham to practice law, early in the eighties. His account of the operations of the Henderson Company is as follows:

"In March, 1888, our furnace was completed, and charged with scrap iron, white or mottled iron, fluorspar, chrome ore, lime, etc. The heat produced in the furnace was from a gas producer, and was intensified to about 4500 degrees Fahrenheit. By and through the intensity of the heat the impurities of the iron became volatilized, and while in this condition passed off with the fumes in about the following order: the metal would be decarbonized, desulphurized, disiliconized, and lastly, dephosphorized. Phosphorus having the strongest affinity for the iron would remain longest, and if the molten metal was not poured at the proper time, whatever remained in the furnace would return into the iron. Henderson called this the flame process. After many tedious delays the furnace was fired, and in three hours and forty minutes the first ton of Alabama steel was molded into ingots on the 8th day of March, 1888.

When this ton of steel was made, the stock of the company soared skyward; 1200 for 100 was given in some instances. While we had steel we had no furnace left. Our furnace lining was of fire brick and dolomite, and the heat was so intense that the lining and brick fused and went out with the steel. In our enthusiasm we overlooked this important difficulty, and proceeded at once to organize another and larger company. The first company was known as the Henderson Steel and Manufacturing Company, and its directors were H. F. Wilson, J. A. Montgomery, —— Geddery, Dr. Vann, John McCoy, and myself. The second company was named the Henderson Steel Company, and the board of directors comprised Colonel J. A. Montgomery, L. A. Rogan, treasurer; H. F. Wilson, secretary; Charles G. Brown, Dr. J. C. Abernathy, C. F. Enslen, Mr. Geddery, Fred Sloss, and W. H. Hassinger."

A large piece of the Henderson steel was sent to a razor manufacturer in Georgia, who returned a gross of razors and a carving knife and fork made from it. The press throughout the country took up the matter. The following letters from United States Senator James V. Pugh to John Colley Rowlett were published:

"The specimen of the first production of steel from Alabama ores, by the Henderson process, is simply wonderful. As far as I am able to judge and according to the judgment of all to whom I have shown the specimens, it must be of the best quality and will stand the severest tests. It will take some time to satisfy the country that such steel as this is claimed to be, can be produced from such ores under any process, but the truth will certainly be ascertained by tests that I am informed will be made, and if the experiments prove successful there can be no doubt that an immediate revolution will follow in the production of steel.

"The consequence of these discoveries upon the future of Alabama cannot be foreseen or exaggerated. The simple statement of the fact that the supremacy of Alabama in iron and steel making is known and accepted would make her growth, wealth, and prosperity fabulous."

The *Atlanta Constitution,* having been shown the razor, made the following statement:

"Mr. M. H. Patty called at our office yesterday and opening a plain razor case took out a double concave blade and presented it to us. There was not much in that, and yet there is something very important back of it. The razor was made of Birmingham steel, the first steel ever made in Alabama. The steel is worked from the common iron ores of the Birmingham District by the Henderson process. His process is mainly, we believe, an adjustment of the chimney draughts, by which the phosphorus is consumed.

"The stock of the company which controls this patent has risen from $200 to $1,000 per share. Mr. Vittur, who made the razor, declares that the steel is the best American steel he has yet tested, and that it may obviate the necessity of his importing foreign steel, which he is now compelled to do.

"A double concave razor made in Atlanta out of Birmingham steel is an accomplishment of what ten years ago would have been considered a foolish boast. The South is moving."[1]

Following this first experiment, preparations were made with great vigor by the company for the manufacture of steel on a commercial scale. A new plant was started near the original ore in Village Creek. Colonel Bush writes: "In the meantime the stock of this company was being bought and sold at fabulous prices. While holding a directors' meeting, someone asked 'how are we going to line the converters?' The question came very near producing consternation. Fire brick and dolomite would not answer; we had tried them. In the crucial test they had melted like lead. It was very questionable whether

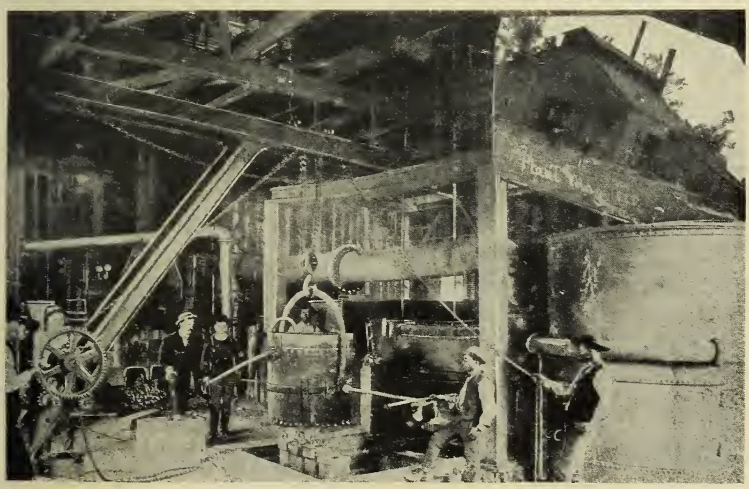
[1] An interesting item relating to Alabama steel history is, that in the year 1867 a few specimens of Shelby iron were sent to the Troy iron works in New York to be tried for the Bessemer process. According to the Alabama Manual and Statistical Register of 1869, a series of experiments was then being tried by Mr. Holly with grades of iron from various sections of the United States. "The steel made from the Alabama [Shelby] iron was," it is stated, "pronounced by Messrs. Winslow, Griswold, and Holly as equal to the best iron they had tested." A specimen forwarded to the Paris exposition "was pronounced to be superior to any yet obtained [in the eighteen-sixties] in America." It must also be recalled that Horace Ware demonstrated the quality of Shelby iron for steel making many years before the Bessemer process was invented, but the results of his action were never widely known, and not even known in the Birmingham District until the present time.

there was anything that would stand the intense heat produced under this flame process. A committee of five was appointed with the suggestion that each member should open correspondence with scientific men everywhere in the world. Within a few weeks G. W. West received a letter from a man in Trenton, New Jersey, who told us of a material called magnesite, obtainable only in Syria. In his letter he stated that some man in Trenton had about seven hundred pounds that we could buy. We bought it by wire. We also gave an order for the importation of several tons. When the magnesite arrived we were ready to start the second furnace. No directions came as to how to use the magnesite. It would not mix with either oil or water; it would not stick to anything, and, sure enough, we were in a quandary, and our patience well-nigh exhausted. We wired to our friend in Trenton, and he wired back, 'Hammer it in!'

"We hammered it in, and that same hearth of magnesite stood the manufacture of eighteen hundred tons of as good steel as was ever made in the United States. Its quality was unsurpassed; boiler plate, railroad iron, cutlery, razors, etc., were made from it, and yet many of our good people were skeptical."

In July, 1890, the Henderson furnace was turned over to a committee from the Birmingham Chamber of Commerce with the idea that its operations might be expanded and iron-masters of the district be induced to take more interest in steel manufacture. This committee comprised A. B. Johnston, then president of the Chamber of Commerce; W. H. Hassinger, manager Alabama rolling mills, Gate City; G. L. Luetscher, chemist of the Tennessee Company; P. L. Leeds, superintendent machinery, Louisville and Nashville Railroad Company, and H. R. Johnston. In this same year the members of the British Iron and Steel Institute visited Birmingham, Sir Lowthian Bell again among them, also Mr. Percy Gilchrist, the inventor of the basic open-hearth process. Henry F. Wilson of Birmingham says: "When Mr. Gilchrist inspected the Henderson furnace at North Birmingham, he said, 'My God, gentlemen, why have you not forty of these instead of one?'"

Notwithstanding a favorable report of the committee from the Chamber of Commerce, the necessary capital could not be raised to enlarge and improve the Henderson plant. It was recognized as a mechanical success, but owing to the high cost of manufacture and the lack of basic iron, it failed commercially.



1. Modern Brown Ore Mines, Tuskaloosa County, T. C. I.
2. Old Brown Ore Mines of Woodstock Company, Calhoun County
3. First Open Hearth Furnace in Birmingham District
The Henderson Steel Company, 1887

In 1892 the abandoned plant was leased by the Tennessee Company for the purpose of continuing experiments. In 1906 it was bought by Messrs. McCormack, Ramsay, and Lehman, when it was dismantled and the material sold as scrap.

To return again to the spring of 1887, this was the date of the construction of the famous Ensley furnaces known as "the Big Four." Construction on two of the contemplated groups of blast furnaces at Bessemer was then under way and was considered a big undertaking. Then the news was given out that the Tennessee Company intended to build four more furnaces all at once! Colonel Ensley himself selected the location. He chose the long strip of land on the western rise of the city of Ensley, directly adjoining Pratt mines, and decided to place the furnaces so far from Village Creek that there would be plenty of room for a steel mill eventually between the furnaces and the creek, not realizing that all that space, and more too, would be required for furnace slag.

Not only had the work of building four furnaces at one time never then been attempted in the Birmingham District; it had never been done in the United States. "It was," Colonel Shook says, "a greater task than any of us ever realized. Up to that time no one had ever attempted to build a plant of such proportions all at once. An order for twelve large blowing engines was placed with the Weimer Engine and Machine Company of Lebanon, Pennsylvania, which was commented on by all the Trade Journals as being the largest order ever placed in this or any other country for blowing engines at one time. The first furnace was completed and ready to be lighted on Thursday, the 11th day of April, 1888, and was blown in and started by Fred Gordon, then a great blast furnace expert and a member of the firm of Witherow and Gordon, under the direction of Colonel Ensley, who was watching with intense interest the starting of the furnace. It happened that the preparations for the lighting of the furnace delayed the time of blowing in from noon Thursday until nearly midnight Thursday night. Watching the clock at ten minutes to twelve Thursday night, Colonel Ensley said, 'Unless you light this furnace in less than ten minutes you cannot light it until Saturday, as I will not agree to light it on Friday.' The second and third furnaces (both of which were constructed by T. T. Hillman) were blown in during the year 1888, and the fourth and last on the 29th day of April, 1889."

Shortly after the last one of the Big Four was blown in, Colonel Ensley resigned from the presidency of the Tennessee Company, sold out every dollar of his interest in the Birmingham District, and went off to pioneer in new fields. His town boom scheme — "the great city of Ensley" — had vanished like a bubble in so far as profit to him or to any one else at that precise period was concerned. The way had been blazed — that was all. Yet that was something. Certain of Enoch Ensley's great dreams are beginning only to-day to be realized. Energetic, indefatigable, the Tennessee colonel went up into the Sheffield District, into the rich and unknown counties of the Highland Rim.

For some time previous to his resignation from the Tennessee Company he had employed Billy Goold and Llewellyn Johns as his two "scouts," to prospect through Colbert and Franklin counties and buy up in his name a large acreage of coal and ore lands. By the summer of 1889 he owned another big estate of mineral lands, and went into partnership in this year with a friend, an enterprising young coal operator named Walter Moore.

Mr. Moore, who is an Alabamian born and bred in Jefferson County, had then been in the coal business only three years. Those three years, however, had been crowded with activity. The Stockton mines, which he and his former associate, T. H. Friel, had operated, he sold to the Tennessee Company, and then organized and operated the Horse Creek Coal and Coke Company (Dora) and the Magellan Coal Company. After joining Colonel Ensley, Mr. Moore merged all of his coal properties with the colonel's new ore and coal lands, and early in 1891 the Lady Ensley Coal, Iron, and Railroad Company was formed, with Colonel Ensley as president and Mr. Moore as vice-president and general manager. Two blast furnaces were begun in Sheffield, and a great scheme of development was inaugurated for that region.

Colonel Ensley did not live to see his big Sheffield enterprises come to fruit. Within the very year the Lady Ensley Company was formed he died. Two years later Mr. Moore sold out these properties which, together with the two blast furnaces built by Colonel Ensley, the Hattie and Lady Ensley, are in 1909 property of the Sloss-Sheffield Iron and Steel Company. In 1893 Mr. Moore organized the Ivy Coal and Iron Company. He captained this concern until 1904, when it was absorbed in the Pratt Consolidated Coal Company, after which event Mr. Moore or-

ganized the Red Star Coal Company, of which he is president in 1909.

The development of all this northwestern region of the State where Ensley and Moore located and where the towns of Sheffield, Florence, Tuscumbia, and Decatur are situated was of slower growth than that of either Birmingham or Anniston. The period of reconstruction and of greatest activity here was during the late eighteen-eighties. Although the counties of the Tennessee Valley, among them Lauderdale, Colbert, Franklin, Lawrence, and Morgan, were with Madison among the earliest settled in the history of the State, and although the first blast furnace of Alabama was located in this region (in the county of Franklin), yet the iron industry secured no permanent foothold here until the city of Sheffield sprang into existence.

The site upon which Sheffield was founded had been regarded since early in the nineteenth century as a superb location for a city. As far back as 1820, in fact, the high limestone bluff at this midway point between Florence and Tuscumbia was named York's Bluff, and the town of York was mapped out on the plateau there. It did not get beyond the paper stage until the year 1883, when "there was made," according to the historian William Garrott Brown, "the first impression that bore fruit."

Just as the early chapters in the history of Birmingham, Anniston, Gadsden, and other towns are practically the history of the activities of a few enterprising men, so with Sheffield. Enoch Ensley, Walter Moore, Horace Ware, Alfred H. Moses, and Walter S. Gordon were chief among the first promoters of this big mining center of the Northern District.

Captain Moses and Colonel Gordon were the founders of Sheffield. Alfred Moses was born September 16, 1840, in Charleston, South Carolina. He was graduated from the Charleston school and took up the study of law. During the war he was appointed to serve in clerical capacity in the circuit court of the Middle District of Alabama, and shortly after the war engaged in the real estate business in Montgomery. He attended the Louisville exposition, and on his return stopped off at Florence to look into a railroad project. "While there," writes William Garrott Brown, "he was persuaded to undertake an excursion to the mineral lands of Franklin County, on which journey he passed over the rolling plateau which lay across the river, almost directly opposite Florence. He was struck with the

beauties and adaptability of the site, and on his return entered into negotiations with Colonel Walter S. Gordon, one of his companions on the trip, by which they became joint owners of a property then estimated at a few thousands of dollars, and now requiring millions to purchase. This was the beginning. The attention of various business men throughout the South, especially in the States of Georgia and Alabama, had already been thoroughly aroused by the wonderful history of Birmingham and had been for some time directed to the Tennessee Valley. It was not a difficult task to make Sheffield the special object of their inquiries. When this was once accomplished, the natural attractions and advantages of the location did the rest. A body of these men guided by Moses and Gordon came together, organized, and made purchases. They secured over two thousand acres of land, to be used as a site for the projected city, at a cost of $50,000. At the same time they acquired mineral rights on thirty thousand acres of coal and iron lands in Franklin, Winston, and Walker counties, paying out in all about one hundred thousand dollars. A corporation was then formed, under the name of the Sheffield Land, Iron, and Coal Company, with a capital stock of $500,000, afterward increased to $1,000,000. Of this company the directors were Alfred H. Moses, David Clopton, O. O. Nelson, and W. S. Chambers of Montgomery, Alabama; W. S. Gordon, F. M. Coker, F. F. Burk, H. B. Tompkins, D. M. Bain, C. A. Collier, and W. A. Hemphill of Atlanta, Georgia; and E. C. Gordon of Clarksville, Tennessee. W. S. Gordon was made president, A. H. Moses vice-president and general manager, and F. M. Coker secretary and treasurer."

The facts that Sheffield served as the natural outlet at the North for the Warrior coal field and vast brown ore tracts of the mineral belt, and combined just as Birmingham did all of the materials for manufacturing pig iron on a cheap and profitable basis, and had, in addition, facilities for water transportation, were advantages that spoke for themselves. But as soon as the boom was precipitated the curtain dropped upon the melodramatic first sale of lots, and the young town sank into oblivion for a space, becoming to all appearances another "town of York."

Not one day in the dull period that followed, however, did Captain Moses and Colonel Gordon abandon faith in the place. That railroads should be brought there and iron making started

were the ends upon which the Sheffield Land, Iron, and Coal Company now concentrated every effort. The Sheffield Furnace Company was accordingly organized in the summer of 1886, with a capital of $125,000, and construction work was started on a one hundred and twenty-five ton blast furnace.

In 1887 the Alabama and Tennessee Iron and Coal Company (officered by Colonel E. W. Cole of Nashville), with a capital of $2,200,000, was induced to make Sheffield central headquarters, and let contracts for three one hundred and fifty ton blast furnaces. In 1889 came Enoch Ensley and Walter Moore and their associates. The construction of the first Lady Ensley Furnace Company furnace made the fifth blast furnace of this locality. The furnaces brought in other industries. Horace Ware, founder of Shelby Iron Works, had been from the beginning a great believer in Sheffield. An interview in *The Atlanta Constitution* quotes Mr. Ware as follows:

" . . . I went into the first furnace company organized in Sheffield because I knew that there would never come a time when Sheffield could not dispose of her product. Now this statement brings me back to my story. Years ago I had projected the establishment of furnaces a little to the south of this very spot on the Tennessee River. I got sick and my plan was delayed. When I recovered it was to find that others had anticipated me, and that Sheffield was the result. Instead of getting mad and throwing away a good thing, I attended the first sale here in 1884, intending to purchase one hundred lots, but the prices went so far beyond my standard that I refused to bid, yet I have since bought these same lots at a big advance on these very prices. That showed my faith. On one of these lots I am going to build a solid granite square six stories high. I live in Birmingham, and will therefore briefly contrast the two places. Sheffield can make the iron itself as cheap as they can at Birmingham, of as good quality, and probably better. Sheffield is further from the coal and ore than Birmingham, but she can make a ton of iron with less ore and less coke, and thus overcome the difference by twenty per cent less cost.

" Then we have the advantage of the river, which simply distances any advantage that Birmingham ever can secure, while at the same time Sheffield will always be sure to get as good, if not better, railroad rates. Sheffield has an abundant supply of water free to all the furnaces, while Birmingham has an inefficient supply, and must always pay a heavy water tax. From the water tower now being built at Sheffield water can be thrown one hundred feet higher than the houses. This will give Sheffield the advantage over Birmingham in the matter of protection

from fire, and in cheaper insurances. In a sanitary point of view, Sheffield excels Birmingham. Sheffield, as a grain and provision distributing point, is bound to become the Southern St. Louis. In fact, there is a strong contrast in the business combination of both places. We can ship Western products as cheaply as can Memphis, which, added to the fact that we are one hundred and forty miles further in the interior, gives Sheffield just that much the advantage in freight rates.

"Not only has Sheffield these advantages over Birmingham, but, in the very nature of things, the latter city will be compelled to ship the greater part of her products from the docks of Sheffield, thus giving us her tonnage. These barges, which will go forth laden with iron and coal and their manufactured products, will return with corn and wheat and flour and hay for distribution through Southern Tennessee, Alabama, Georgia, and South Carolina. Then look at the railroad facilities under rival combinations. There is the Richmond terminal system, the Louisville and Nashville system, and the Huntington system, all of which will compete with each other. These rival systems run along every point of the compass, and pour into the lap of Sheffield the iron, coal, grain, and other products of a continent. But Sheffield is not going to be content with the making of iron; she will follow out its manufacture into all subsequent stages. A pipe company is now at work, and negotiations are now being completed for a stove manufactory. Sheffield has the Southern market beyond all manner of doubt, and as long as a Southern product can find entrance into the market of the North, that place so favored will be Sheffield. She can go into all the river towns of the West cheaper than any other point in the South, and always as cheap as from any point in the East."

Captain Moses and his associates adopted the policy ordained by the Elyton Land Company in making their real estate concern a leading factor in the bringing of diversified industries and donating many acres of land to the town for public purposes. The stock of the company soon rose and the prices of real estate in proportion. "Investors flocked in from all directions," says William G. Brown. "The prosperous state of things throughout the recently developed South, in general, affected favorably the public attitude toward the youngest product of the new order of things in Alabama. Fortunes were rapidly acquired, population greatly increased, houses were built, and companies organized for the purpose of building more; stores were set up, and two banks. The First National, with C. D. Woodson as president, and the bank of Sheffield, with Alfred H. Moses president, each having a capital of $100,000, were organized; real estate

agents came in swarms. There could be no doubt that for success or failure, wisely or unwisely, a vast amount of energy had been called into play."

Captain Moses, in addition to his offices in the Sheffield Land, Iron, and Coal Company, as director in the Sheffield Furnace Company, and as president of the bank of Sheffield, became a director in the Sheffield Pipe and Nail Works, in the Sheffield and Tuscumbia Street Railway Company, and also served continuously as mayor of Sheffield. In the summer of 1887 occurred the significant event of the consolidation of the several corporations forming the Sheffield and Birmingham Coal, Iron, and Railroad Company, with a capital stock of $7,225,000.

The location and the quality of the picturesque in the place, its natural advantages as an industrial city, its climate, its facilities for making and transporting pig iron at so cheap a rate, the rapid construction of railroads to the point, — all these attributes combined to plant it on a solid and permanent basis. Among other men, besides those of whom mention has been made, whose names are associated with the modern growth of the Sheffield District are J. W. Worthington, J. W. Dimmick, Joseph H. Nathan, S. B. McTyler, Major Edward Doud, E. M. Ragland, and at the present day the "veteran King of the Southern Iron world," Henry F. DeBardeleben. The furnace plants of this locality are now owned and operated by the Tennessee Coal, Iron, and Railroad Company, and the Sloss-Sheffield Steel and Iron Company.

The building up of Sheffield had an immediate effect upon the neighboring town of Florence, the county seat of Lauderdale County, which had lain since the war in a comatose condition. Although this little city, like Tuscumbia (the site of a French trading post) and Decatur, had its beginnings in the early nineteenth century, and became in the thirties the distributing point for all merchandise in the Valley region, yet it never stepped with any vigor into the iron business. Beyond one foundry, the Wright and Rice Foundry and the Van Lier furnace, located on the northern edge of Lauderdale County, there were no other iron enterprises here in antebellum days. No sooner, however, did "the town across the river" spring up unawares than the citizens of Florence got together to maintain and promote the industrial and commercial interests of their locality. The Florence Land, Mining, and Manufacturing Company was formed by

William Basil Wood and associates, who immediately set to work on practical ends.

Judge Wood, whose grandfather was Alexander Hamilton's secretary, was born in Nashville, Tennessee, on October 31, 1820. After graduating in law he practiced in Florence in the forties, and became judge of the Lauderdale County court. During the war he served as colonel of the Sixteenth Alabama Infantry, and in 1863 was transferred by President Davis to the Army of Northern Virginia and appointed judge of the military court of the First Army Corps. After the war, like Colonel Kyle of Gadsden, Judge Wood went into the steamboat business and engaged in promoting diversified industries. He was associated with Samuel D. Weakley and others in various enterprises, owned and controlled a line of river steamers, and also promoted railroad interests of northern Alabama, and was the founder of the State Normal College and for many years president of its Board of Trustees.

Together with Honorable Wm. C. Sherrod (a member of the Forty-first Congress) and others, Judge Wood organized the W. B. Wood Furnace Company, in 1887–88, and constructed a one hundred and fifty ton blast furnace. He engaged John M. Norton, an experienced furnaceman, as superintendent of the plant. Major Norton had served under Colonel Sloss at the old Oxmoor furnaces in Jefferson County for three years, and had been engaged in the construction and management of iron works in Kentucky, Ohio, Illinois, and West Virginia. He was the son of G. W. Norton, the pioneer nail manufacturer of the Ohio Valley, and learned the trade of nail maker under his father when the latter had started the first nail works of Wheeling, West Virginia. Major Norton also served as superintendent of construction of the iron works of the Alabama and Tennessee Company at Sheffield.

A second blast furnace was built at Florence in 1887 by the North Alabama Furnace, Foundry, and Land Company, of which Major A. S. Lawton of Atlanta, Georgia, was president. This concern, with a capital of $2,000,000 at the outset, represented a number of the wealthiest men in the South. It was not long before Florence was locking horns with Sheffield; 1901 was the town's banner year in so far as industrial enterprise was concerned, and the progress since then has been steady and wholesome.

Coincident with the rehabilitation of Florence was also that

of the town of Decatur in Morgan County. This city, founded shortly after Alabama was admitted to the Union, had a period of a certain activity before the war, but at the close of hostilities was practically in ruins. Two houses only were left intact. Joseph Monroe Hinds, who eventually served as Consul General of the United States at Rio Janeiro, and later as United States marshal for the Northern District of Alabama, was instrumental, together with H. S. Freeman, in the first steps looking towards the reconstruction of the place.

The plan for the new town was to make it an industrial city of varied manufactures. It began gradually to work itself out, though it may be observed that there was nothing automatic about it.

A young train dispatcher of the Louisville and Nashville Railroad stationed at Decatur in the year 1870 was back of affairs. His name was Andrew Calhoun Frey. Although a Canadian by birth, he was of Swiss parentage and a practical, farseeing, and energetic young man. He made a certain land purchase, — some forty-four acres, in the heart of what is now the city, — which sold in the eighties at a good round sum, and gave the young telegrapher his start. He and his associates then formed the Decatur Land Improvement and Furnace Company in 1887, and built a one hundred ton blast furnace, and took a strong hand in the making of the place, bringing in industries of many sorts. At the same time the Decatur Mineral and Land Company was organized and officered by Milton Humes, Noble Smithson, C. F. Robinson, and W. W. Littlejohn.

Among other enterprises located there were the Decatur Iron Bridge and Construction Company, officered by George A. Mooar of Keokuk, Iowa, and by Robert M. Curtis of Chicago; the Charcoal Chemical Works, Ivens and Sons' Steam Engine and Iron-working plant; the United States Rolling Stock Company, and the Consolidated Car Construction and Repair Shop of the Louisville and Nashville Railroad, the largest shop of its kind (in 1887) south of the Ohio River.

Thus, as may be seen, the mineral counties of the Highland Rim were quick to enter the race for progress. The spirit of competition with the counties of the Birmingham District was keen and sharp for a few years, but this attitude is gradually developing into more of a spirit of co-operation.

CHAPTER XXV

THE MARCH OF THE T. C. I. 1888–1895

Majority control of Tennessee Company acquired by new hands on Wall Street. Election of ex-governor J. C. Browne of Tennessee to presidency. Senator T. C. Platt of New York on governing Board. Company pronounced "a real competitor of Pennsylvania." Senator Platt succeeds Browne as president. Old régime of company returns to power. Nat Baxter, Jr., again becomes president. The biggest trade in Tennessee Coal, Iron, and Railroad Company's history. Acquisition of the great DeBardeleben Coal and Iron Company and Cahaba Coal Mining Company. Colonel DeBardeleben's version of the long and the short of it. New holdings of Tennessee Company. New board of officers. Panic of '93. Truman Aldrich steps into the breach. DeBardeleben takes his first and last plunge into Wall Street. Resignation of Alabama officers. T. H. Aldrich nominated to Congress. Introduction of William Battle Phillips, Albert Edward Barton, J. Warner Shook, Benjamin Talbot, Paschal Shook. Anecdote of Mr. Baxter in New York. Playing tunes on pig iron warrants. "Tiding over" a crisis. Life line held out to company. First making on large commercial scale of basic pig iron by George B. McCormack. Turning point in industrial history of Alabama. Character of Mr. McCormack's work as general manager of T. C. I. A. E. Barton's experiments. Lack of capital available for new enterprises. Process employed. Value of coal and iron lands in State trebled. Steel making era ushered in.

LATE in the year 1888 another revolution occurred in the Tennessee Company. W. M. Duncan interested a new group of New York capitalists, Thomas C. Platt among them, and majority control of the company passed into their hands. Under their manipulation the price of the capital stock went up from about thirty cents to one dollar and twenty. A new board of directors assumed control of the company and new officers were appointed. John C. Browne of Tennessee was elected president, Judge H. G. Bond vice-president, and Colonel James L. Gaines general manager.

The new president was a man of a distinguished public record, — a former governor of the State of Tennessee and a great railroad man. When called to the presidency of the Tennessee Company, he was, however, aged and failing in health. He had started in Nashville on his career as a lawyer away back in Bell and Bilbo's day. When the Civil War broke out he had worked

up a large practice at his home town of Pulaski, Tennessee, but his war record is too considerable for detailed mention here. The company he raised became eventually a part of the Third Tennessee, and J. C. Browne became a major general. Then he quietly resumed his law practice where he left off at Pulaski. He was elected president of the Tennessee Constitutional Convention in Nashville in 1870, from which time he took and held leadership in the civil affairs of that State. His administration as governor of Tennessee continued four years and was sound and able. He retired, however, from the political field to become one of the vice-presidents of the Texas and Pacific Railroad, and to spur on the completion of that vast system of the southwestern roads. Serving them as general Western adviser of the Gould System, he became at length its president, returning when near his sixtieth year to his Nashville home. To a man of so active a turn as John C. Browne it must have been a source of grief that he must bring to his last enterprise a palsied hand. On August 17, 1889, not many months after his election to the presidency of the Tennessee Company, he died rather suddenly.

On September 6 of the same year the new dirctors of the company elected Honorable Thomas C. Platt of New York to the office. Senator Platt having looked after the New York end of the company for some little time was more or less familiar with its internal affairs. He had, in fact, at one time made a personal tour of inspection of the properties. "I believe," he said then, "that without question it is the greatest property of the kind upon earth, and that there is a future for it such as will attract the whole business world in but a little time to come."

Mr. Platt expressed his gratification at being elected president as follows: "I shall not be a figurehead; of that I assure every one. I regard the position I hold among you as the most honorable and the highest in a business sense that I have yet been called to fill. It shall be my endeavor to serve the company's interest to the utmost extent of my abilities. I shall watch your interests in New York and co-operate with the Nashville headquarters in all particulars, looking to the company's interests, and I shall make a point of being with you in Nashville as often as necessity suggests."

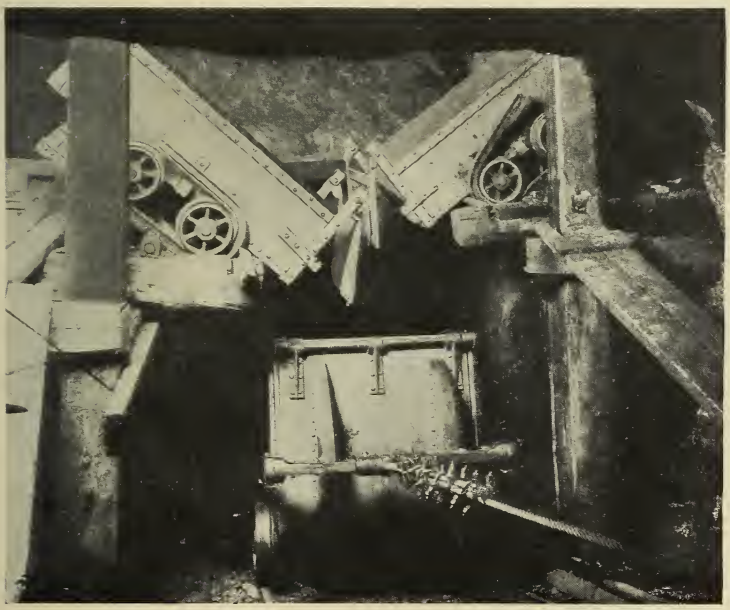
This was the period when young George B. McCormack, the only member of the old board of officers retained, was made superintendent and general manager of the Pratt mines division,

succeeding Charles P. Ball. Now, together with Erskine Ramsay, he bent all of his efforts to the work in hand. An article descriptive of the Tennessee Company properties in the *Pittsburg Chronicle Telegraph* (1890) speaks of the Pratt mines division as follows:

"The Pratt mines were among the first coal mines opened in Alabama, and the first from which a good quality of furnace coke was made. These works were consolidated with the Tennessee Coal, Iron, and Railroad Company, and are now the largest coal and coke plants in the South. The division is under the general supervision of Mr. G. B. McCormack, with Mr. Erskine Ramsay, a well-known young mining engineer, formerly superintendent of the Southwest Coal Company's works in the Connellsville District of Pennsylvania, in charge of the mining department. They are both practical men and have made some important improvements about the works during the past year. They now have eight large mine openings and 806 coke ovens in full operation. They furnish coal for the 300 ovens of the Thomas furnace, the 250 ovens at the Alice furnace, and the 250 at the Sloss ovens in Birmingham. The output has been largely increased during the past year.

"During the month of January the output of the mines was 107,000 tons. This, notwithstanding all mines were idle on New Year's and the usual demoralization following the holiday festivities. The total output during the year 1889 was 1,108,300 tons, an increase over the previous year of 232,070 tons. The Pratt mine coke ovens made 267,514 tons of coke, being an increase over the previous year of 79,820 tons of coke. About 2,000 free laborers and 800 convicts are steadily employed about the different works here.

"All openings into the coal have been skilfully and systematically made into the Warrior coal seam. . . . Mr. Ramsay has made some important improvements at Shaft No. 1. The tail-rope haulage system was introduced to bring the coal to the bottom of the shaft. It now extends back 2,700 feet and will soon extend 1,000 feet further in the McArdle slope. Mr. Ramsay recently completed what was probably one of the greatest feats in mining engineering ever performed in the South. He sunk an air shaft 360 feet deep; three-quarters of a mile back from the hoisting shaft, 210 feet was driven down from the surface and 150 from the interior of the mine. What made the feat the more difficult was the outside surveys had to be made over badly broken ground, deep ravines, etc. He was assisted in this work by Mr. H. A. Lint. They have some fine machinery at this mine for hoisting, pumping, etc. The large Yough pump, built by Boyts, Porter, and Company, of Connellsville, Pennsylvania, and placed in this shaft a year ago,



1. Face of a Working Heading in Muscoda Mines, Red Mountain, T. C. I.
2. Method of dumping Ore into Skips

has done great service. Had it not been for this pump, when the mine took fire last summer, it would have been doubtful if they could have mastered it. About 800 tons of coal is hoisted from this shaft daily."

The *Nashville Union* observed editorially about this time: "Nothing has ever been done in the South that looks so much like being a real competitor of Pennsylvania in the iron business as this organization with $10,000,000 capital."

In 1891 another change in the company took place; the former régime, headed by Inman, again acquired majority control of the Tennessee Coal Company stock. Nat Baxter, Jr., again became president, succeeding Senator Platt, and Colonel Shook, T. T. Hillman, and James Bowron again became connected with the Tennessee Company, while Mr. Duncan resigned his position as chairman of the executive committee.

No sooner was Mr. Baxter in authority once more than he made another big deal for the Tennessee Company, — acquiring the DeBardeleben Coal and Iron Company, and the Cahaba Coal Mining Company. The deal came about in this way: From the date of its entrance into Alabama the Tennessee Company had been the active rival of Colonel DeBardeleben's great company. A rumor that the Tennessee Coal Company people were considering the purchase of the Sloss Company put the various other Alabama coal and iron dealers on their mettle. Both Colonel DeBardeleben and Mr. Aldrich scented disaster for themselves and their immediate associates, were this consolidation effected. The colonel decided, therefore, to get first hold of the Tennessee Company himself, and make it, as he says, "a crawfish for his feeding." He had spun the State of Alabama around like a top. There was not his match as a speculator and as a trader, south of the Tennessee. But he did not reckon north of the Tennessee. Furthermore, Colonel DeBardeleben was not aware that the Tennessee Company was, early in 1891, again on the verge of bankruptcy, owing to the Wall Street manipulations. The colonel's properties and Aldrich's were some of the greatest stuff in Alabama, "practically of the cream of the whole mineral region," it was generally agreed.

DeBardeleben and Baxter met. Mr. Baxter persuaded the "King of the Southern iron world" to exchange $10,000,000 worth of good stock for $8,000,000 of the Tennessee Company's securities. Coming into the deal Mr. Aldrich also exchanged

his great Cahaba coal properties for Tennessee Coal Company securities. Said DeBardeleben: "I had been the eagle eating the crawfish. Now a bigger eagle than I had ever been came along and swallowed me. That's the long and the short of that trade."

The great deal struck upon the Southern coal and iron horizon as a bolt out of the blue. The Tennessee Company now possessed in addition to the mineral lands and furnaces of the Pratt Coal and Iron Company, and its own holdings in Tennessee, the new group of Bessemer furnaces, the historic Oxmoor furnaces, ore properties on "pretty near the whole of Red Mountain," and Champion besides, and the coal fields of Helena, Henry Ellen, Blue Creek, Blocton, and Gurnee.

"The night after the trade," says Mr. Baxter, "we were all up in Inman's room at the hotel, considering what we'd capitalize at. Inman said, — you know that offhand way of his, — 'Boys, call it twenty millions.'" Thus the company was then and there reorganized and placed on a basis of twenty million dollars. For the remainder of the year the three companies ran on as they were.

In the latter part of 1891 an experiment of particular interest occurred, — the making of the first low silicon or basic iron. At that time the general characteristic of Birmingham pig iron was high silicon with an average of two and one half per cent. Colonel DeBardeleben, Mr. Roberts, and Mr. Aldrich became interested in a process by which it was said the iron could be softened, and they ordered the experiment tried at the Little Belle furnace. John Dowling was then the furnaceman in charge and he says: "We had eight beds of chill molds made at Begg's foundry, and rubbed a lot of graphite on the inside of the molds. Then by blowing cold and using more lime to make a bath to absorb the silicon we got the iron down to about one half of one per cent of silicon. We made some three or four hundred tons."

This was the first basic iron made in Alabama and it was sold to parties in Massachusetts. This experiment was attempted in order to show that basic iron could be made directly from the blast furnace without the necessity for any special patented process. Mr. John Ford of Youngstown, Ohio, had visited the Birmingham District and told Mr. Roberts and Mr. Aldrich how to do it with Alabama ores and furnaces.

In 1892 an election of officers of the consolidated properties took place and the three large companies, each comprising in themselves so many subsidiary companies, were formally united and became the Tennessee Coal, Iron, and Railroad Company. The full list at this date is as follows: First, the Tennessee Company which comprehended the Sewanee Mining Company, the Sewanee Furnace Company, the Southern States Coal, Iron, and Land Company, and all of the properties of the Pratt Coal and Iron Company (the latter in turn comprised the three Alabama companies, Alice Furnace Company, Pratt Coal and Coke Company, and the Linn Iron Works). Second, the DeBardeleben Coal and Iron Company and its consolidated companies; Eureka Furnace Company, Little Belle Furnace Company, and Henry Ellen Company. Third, the Cahaba Coal Mining Company with its partner, the Excelsior Mining Company. Thus the Tennessee Company was now made up practically of twelve different companies. It subsequently (in 1898) acquired the Robinson Mining Company, owning a contracting outfit on its lands; the Sheffield Coal, Iron, and Steel Company, the Smith Company (another contracting outfit) in 1899; and the Bessemer Rolling Mill Company in 1900, making a final total of sixteen companies merged into the one, owned at the present day principally by the United States Steel Corporation.

The new board of officers elected in 1892 were: Nat Baxter, president; H. F. DeBardeleben, first vice-president; T. H. Aldrich, second vice-president and general manager, and David Roberts, third vice-president; James Bowron, secretary and treasurer; G. B. McCormack, assistant general manager; and Erskine Ramsay, chief engineer. Two vacant stores in the Potter building on Morris Avenue were leased and thrown into offices, and the main headquarters of the Tennessee Coal Company were soon afterwards removed from Nashville to Birmingham.

The panic of '93 caught the company and all lent hand then for its common interests. The price of iron went down to six dollars per ton at the furnace. Credit was refused the company, while some of the directors let it alone, to sink or swim as it might. Notwithstanding its tremendous properties it was forced to struggle for life.

Speaking of this crisis Mr. Aldrich says: "Mr. Baxter directed the company through these days with skill and ability. At all times clear-headed and logical, and a pretty strong

financier, he took care of the obligations, and met them every one. The only man we could get credit from in Birmingham about the top of the panic was Braxton Bragg Comer. He seemed to be about the only person who thought the Tennessee Company would get out alive."

Mr. Comer (who in 1906 was elected governor of Alabama) let the Tennessee Coal Company have some $19,000 worth of grain and flour from his mills during the panic. Every morning he would drop in the office to see General Manager Aldrich.

"Going to bust to-day?" he would inquire.

"Not to-day, Mr. Comer," Mr Aldrich invariably replied, "but I can't tell about to-morrow."

Mr. Baxter says: "We swapped and we bartered and we traded and we kept on doing it. All our pig iron was stacked up and we could n't sell it, so we used it as collateral with which to borrow money to meet current expenses. I remember Morris Adler, who then had a wholesale grocery, kept our stores full, exchanging his goods for our pig iron. Then I 'd buy up property now and then to keep the tune going and have people say, 'Why the Tennessee Company just paid a million dollars for another piece of Red Mountain.' It was good stock in trade, you know. A friend of mine said: 'These Tennesseeans make their living swapping jackknives and horses, and that 's the only way Baxter got the Tennessee Company through '93.' As a matter of fact, you know, that was the truth. Trading carried us through, and we lived on paper."

A day came, however, when even the life of the paper was threatened. Every spring in Wall Street seemed to have gone dry, so far as nourishment to the Tennessee Coal Company went. A note for $40,000 had to be met, and the money could not be obtained in the South. The credit of the company had to be sustained or the whole structure would fall. It was in the very midst of the crisis when the banks had closed, and the officers of the company could not even get their own money out of the banks; when all excepting four of the blast furnaces were shut down, and there was no sale for the iron made by these four; and when thousands of tons of pig iron were stacked up all over the ground. When all other officers had failed to raise the funds, Mr. Aldrich went up to New York to try to raise the money for the note. After showing the directors that the Tennessee Company had over half a million dollars worth of pig

iron they all agreed to advance $175,000 at a six per cent rate (with the exception of Mr. Inman who charged sixteen per cent), accepting pig iron as security. T. H. Aldrich's action at this juncture helped the Tennessee Company over its most critical period.

No sooner was the panic safely weathered than the Tennessee Company and nearly all of the coal and iron companies of the Birmingham District faced a heavy and disastrous strike. Low prices in iron continued to prevail throughout 1893 and early in 1894. There began to be discerned signs of improvement, however, and Colonel DeBardeleben, "persuaded that another boom was in the wind," went up to New York to play a great game — to buy up for himself all the blocks of Tennessee Company stock so as to gain majority control. It was the Alabama mining King's first plunge into Wall Street; "and there," he said, "I met my Waterloo." He came back "dead broke." Although still occupying high official position with the company, his entire personal fortune now fed the winds together with all the dollars of those of his associates who had backed him in the mad venture. Now in the great company in which he had formerly owned millions of dollars worth of stock, DeBardeleben had, when the gambling game was over and done, not one dollar's worth. He beat disabled wings a space. Speaking of it long afterwards he said: "They cut my claws, and you can't fight without claws. When my money went I came to hear men's voices change, see their expression change. . . . And I clawed the rocks."

But his old-time energies eventually returned. After his resignation (late in 1894) from the Tennessee Company, he embarked on new enterprises, and is at the present day vice-president of the Alabama Fuel and Iron Company, and with his sons has begun the building of other great mining enterprises in the Sheffield District.

As for Mr. Aldrich, he also resigned from the Tennessee Company in 1894, and selling out his interests in the historic Montevallo property to his brother, W. F. Aldrich, he entered the political field. Nominated for the Fifty-fourth Congress jointly by the Republican and People's party, he represented the Ninth District for a brief term. He obtained appropriations to develop the waterways, and, as the record shows, he championed every matter of value to the South, whether of party value or

not. Mention of Mr. Aldrich's subsequent operations will be made in another chapter.

Mr. Roberts, whose death occurred in 1909, retained his office as vice-president in the Tennessee Company until 1897, when, in conjunction with the other South Carolina stockholders, he sold out all of his interests in the company. He subsequently organized the Brilliant Coal Company which he officered in 1907–08 together with his son, David Roberts, Jr., and General E. W. Rucker.

Connected with the Tennessee Company on or about this period, in addition to the officers mentioned, were William Battle Phillips, Ph. D., chemist and metallurgist for the company; Albert E. Barton, superintendent of the Ensley division; Warner Shook, Benjamin Talbot, and Paschal Shook.

Dr. Phillips, a graduate of the University of North Carolina and the School of Mines at Freiberg, Saxony, was a native of North Carolina. He was born at Chapel Hill, July 4, 1857. In 1888 he opened an engineering and chemical office in Birmingham in company with Clarence R. Claghorn. He also acted as professor of chemistry and metallurgy in the University of Alabama and later went to New York as chief of the editorial staff on the *Engineering and Mining Journal.* Returning to Birmingham he became connected with the Tennessee Coal Company, with which company he served until 1898. The company's chemical department was organized by Dr. Phillips, and systematic methods of sampling and analyzing their raw materials and products were instituted by him. He also conducted extensive experiments on the concentration under patents of Barton and McCormack of the low grade iron ores of the Birmingham District. Dr. Phillips, as secretary of the Birmingham Commercial Club, carried an exhibit from the district to the Omaha exposition which won a gold medal. About this time he also prepared for the Alabama Geographical Survey a monograph on iron making in Alabama.

In 1898 Dr. Phillips became editor of the *American Manufacturer and Iron World,* and two years later was called to Texas to organize and conduct the mineral survey of that State. He returned to Birmingham in 1906 to resume the practice of his profession as metallurgist and consulting engineer until again called to Texas in 1909. Together with the work of the State geologist, Dr. Eugene A. Smith, the publications of William

Battle Phillips are held as the standard technical authorities on the Alabama mineral region.[1]

Mr. Barton entered Alabama in 1887, coming direct from England where he had been associated several years in the smelting of iron. He took first the position of chemist for the Eureka Company at Oxmoor, later becoming connected with the management of a number of other furnace plants in the Birmingham District. In 1890 he left the Woodward Iron Company to take a position with the Tennessee Company. It was while at Ensley that Mr. Barton was instrumental in bringing about the Tennessee Company's first export trade in Southern pig iron. During the great depression that existed in the Southern iron trade, the officials of the Tennessee Company, prominent among them Mr. Bowron, conceived the idea that it might be possible to find a market in Europe for the iron that was being accumulated in the company's yards. Mr. Baxter decided to send some one over to investigate this. Mr. Barton was selected, and during his visit abroad was successful in introducing pig iron to consumers in Italy, Austria, Germany, England, and Scotland, placing a considerable tonnage. This beginning brought further business which, under the leadership of Mr. Bowron, had the result that Birmingham was able to exchange a considerable proportion of the raw material that was being mined for foreign money that was for the most part spent in the district.

Associated with Mr. Barton for a short period as assistant superintendent at Ensley was J. Warner Shook, a son of Colonel Shook, a graduate of Sewanee and of the Boston Institute of Technology. Young Mr. Shook started in at the Ensley works in the eighteen-nineties, as a machinist. During the first handling of the basic iron in 1895–96 there was adopted an invention of his, a steam device for cleaning the cinder cars mechanically, which eventually came into general use in the district. Mr. Shook is at the present time vice-president and general manager of the Central Iron and Coal Company at Holt, Alabama.

Benjamin Talbot, like Mr. Barton, was by birth an Englishman. He had been acting as superintendent of the Southern Iron and Steel Company at Chattanooga, but in 1891 entered the employ of the Tennessee Coal Company. He was born in

[1] These are found in the various journals edited by Dr. Phillips, and also in the files of the *Iron Trade Review*, *The Iron Age*, and in the "Transactions of the American Institute of Mining Engineers."

Shropshire, 1864. His father, Benjamin Talbot, owned the Castle Iron Works at Willington, Shropshire, and operated a small Clapp-Griffiths steel plant. Young Talbot's first experience in the trade was manufacturing "basic open-hearth steel."

His assistant in his various experiments was young Paschal Shook, Colonel Shook's oldest son. When the Tennessee Coal Company moved its headquarters to Birmingham, young Shook was acting as stenographer to George B. McCormack. He afterwards became associated as an officer with the Alabama Steel and Ship Building Company. In 1909 Paschal Shook is associated in business with John Fletcher. A portion of their company's brown ore holdings is situated on the historic old Cane Creek Iron Works property in Calhoun County.

As for Mr. Talbot, he left the Tennessee Company in 1893 to take the position of steel works superintendent at the Pencoyd Steel Works in Pennsylvania. Here he commenced the manufacture of basic open-hearth steel, and in 1899 brought to perfection the Continuous Steel process, which bears his name, and which invention has placed him in the front rank of steel men. When the Pencoyd Steel Works were absorbed by the United States Steel Corporation in 1901, Mr. Talbot returned to England to develop the Continuous Steel process there. He became managing director of the Cargo Fleet Iron Company of Middlesbrough. In 1908 he received the highest honor to be obtained in the iron and steel world, — the Bessemer medal of the Iron and Steel Institute.

Meanwhile, the improvement in the iron trade so long hoped for did not brighten the financial affairs of the Tennessee Company. Another note of $40,000 came due in the spring of 1895. "I saw a receiver around the corner," said President Baxter, "and I started for New York in a hurry." Here a meeting of the board of directors was called and Mr. Baxter stated the facts and asked for $40,000 to make the paper good. A blank silence was his answer. Then one director reached for his derby; another director took out his watch; one had a train to catch; another one, an appointment; but at this juncture Mr. Baxter stood up:

"Gentlemen," he said, "if we're going to break up, let's break up orderly. You're afraid you won't get your interest. I want to tell you all right here now that I guarantee personally

to you that every interest installment on the bonds will be paid to you the day it 's due, every cent of it. You know the conditions. You see the case is desperate. Your company, men, will go to the wall within twenty-four hours unless this money is raised."

Every director, excepting John H. Inman and James T. Woodward, filed out of the room. Mr. Woodward "sat like a man paralyzed," but Mr. Inman was holding his sides laughing, and "laughing fit to kill." Although it was the funeral of his own company, and "by rights he was chief mourner, yet here he was turning it into a regular Irish wake!"

Mr. Woodward finally went to his bank and Mr. Baxter to the street, his pockets full of the Tennessee Coal Company paper. He went across to Brooklyn and saw George Hull. Playing tunes on pig iron warrants was an accomplishment in which every Tennessee Coal Company official by this time excelled. Mr. Baxter sold $10,000 worth of warrants to Mr. Hull, "on the tune, not the facts this time." With Hull's check in hand the spirits of the Tennessee Company president rose, and he sold warrant after warrant. That evening, "almost done up," he went back to the Hanover National Bank to see Mr. Woodward, who had been sending runners out after him all afternoon. "Woodward, I 've placed $30,000 worth!" he said, and wiped the perspiration from his face.

Woodward jumped to his feet: "The deuce you have!" he exclaimed. They telephoned Inman then, and the little $10,000 left was like making up a dime. "I wired the news to the boys in Birmingham," said Mr. Baxter. "They felt pretty good, and folks all around said: 'Well, it looks as if the Tennessee Company is getting on its feet again. But then, they 've got all those big guns of directors in New York behind 'em, backing every step they take.' No wonder Baxter has a cinch! All he does is run up to Broadway and say to a director, 'Here, give me a million dollars,' and the director forks it over!"

In the month of July, 1895, occurred the most signal achievement of the Tennessee Company up to this date. It was the first production on a large commercial scale of basic pig iron. This event, which marks the turning-point of the industrial history of Alabama, in that it served to swing the district into steel making, was brought about by George B. McCormack.

But slight mention has been made of Mr. McCormack up to this period, when from positions of shipping clerk, operator, stenographer, auditor, superintendent and general manager of Pratt mines division, and assistant general manager, he had now become general manager of the Tennessee Company, and was proving himself to be a man of positive captaincy. It will be recalled that, beginning with old Sewanee days, he had obtained firm grip on every detail of the company's business and had won the confidence and respect of his officers. "His industry, good judgment, and practical ability impressed every one," says Colonel Shook. To reduce the cost of production now became his main effort when he, at length, reached a position of authority. When pig iron was brought down finally at Bessemer to $5.30 per ton cost under his management, there was great satisfaction.

The superintendent of the Bessemer furnaces, then Llewellyn Johns, exhibits to-day with the greatest pride the following letter written him by General Manager McCormack relative to this matter:

"You have certainly broken all records on coke pig iron made from red ores and I believe have broken all records for coke iron made from other ores. It shows that you and those under you deserve and will receive a great deal of credit for the good work you are doing. If all the furnace plant of this company can be brought down to your record in cost it would make our company the richest in the world.

"(Signed) G. B. McCormack."

Mr. McCormack was, in 1895, together with Mr. Bowron, the only active resident officer of the Tennessee Company, and he had in his sole charge every portion of the operating end in mining, manufacturing, and transportation. His administration carried with it the opening of many new mines and the construction of many new plants of various kinds. It was the period of the company's greatest growth.

Mr. McCormack had principles of economy on his fingers' ends. Then, too, he kept minutely and precisely informed about every division under his supervision, and lost no occasion to encourage and co-operate with his men.

"Every morning, regular as a clock, year in and year out," relates John Shannon, who was then furnace superintendent of Alice furnaces, "Mr. McCormack would ride up on horseback and take a careful look over the furnaces, talk things over with

me, and ask if I had any suggestions to make, or if there was anything I wanted done. He never failed to make his daily inspection personally."

"McCormack was always experimenting," declares Mr. Aldrich. "I remember at the Little Belle, especially, he was forever making something new. For instance, one experiment in which he and Barton were interested demonstrated that a sixty per cent concentrate could be produced from Red Mountain ores, and that when ore should become dearer, the low grades of the district could be used to advantage. Such low percentage ore of which hundreds of millions of tons exist could not then be treated like this with any profit, as the richer ores were selling too cheaply in competition."

There eventually grew up between Mr. McCormack and Mr. Barton a strong friendship, a circumstance indirectly related to the basic iron business. On one occasion, when Mr. McCormack was discussing with Mr. Barton the making of special grades of iron to fill certain orders, the English iron expert declared that he could make a basic pig iron fit for being converted into open-hearth steel, and he went into a detailed explanation of how he would proceed to do so. He convinced Mr. McCormack of his ability to do it. As it chanced just at this particular juncture there was no market for either foundry pig iron or mill iron, on which all their furnaces were running, while there was a demand for basic pig iron; but it was then generally considered an impossibility to make this grade of iron out of Alabama ores. Mr. Barton states in this connection:

"Unfortunately the local ore contained too much phosphorus to be made into steel by either the Bessemer or Open Hearth acid processes, and not enough for the Basic Bessemer process, which were those then commonly in use elsewhere. It was found to be impossible to eliminate the phosphorus in the blast furnace, and experiments were conducted at Ensley for the manufacture of a pig iron higher in phosphorus than that usually made by the addition of phosphatic rock as a flux, so as to make the iron suitable for the basic Bessemer process. There was then no demand for such pig iron, and the necessary capital for converting it into steel was not available, and this was therefore not tried commercially. About this time the basic Open Hearth process began to come to the fore, and for this southern pig iron would be suitable, providing the percentage of silicon and sulphur could be kept sufficiently low. With the siliceous and variable ore obtainable this was not thought practicable, and sug-

gestions were made for treating the ordinary siliceous pig iron first in an acid Bessemer Converter, so as to remove a portion of the silicon. This, however, would have been a wasteful and costly process. It was therefore decided to try to reduce the silicon by pouring the iron through a fluid basic bath.

"Together with Mr. Benjamin Talbot of Continuous Process fame, I attempted to reduce the silicon in the ordinary iron made at Ensley by pouring it through a bath of blast furnace slag, made sufficiently basic by the addition of oxide of iron or finely powdered ore. This at first appeared to be successful, as the silicon was reduced below the limit required, but unfortunately at the same time the sulphur from the slag was absorbed by the pig iron so as to make such a process useless commercially. These experiments went on continuously."

When, at length, Mr. Barton announced that he could make a basic iron the matter was at once placed by Mr. McCormack, who had every faith in his ability, before the higher officials of the company, and every influence was brought by him to have the experiment made. From time to time it was urged. It was, to Mr. McCormack's notion, the one hope, not only for the Tennessee Company, but for the Birmingham District. One morning Mr. Baxter received a telegram from the Matthew Addy people, asking him to quote a price on twenty-five thousand tons of basic iron.

"There was not a furnace of the Tennessee Company fitted for the manufacture of such iron," writes Mr. Barton, "and the addition of a heavy burden of lime to a furnace with such variable ores as had to be used might probably result in the loss of the furnace upon which the experiment was tried."

Mr. McCormack and Mr. Barton figured that the loss to the company in case they failed would be $1,000. "Just that much out," said Mr. Baxter, "when we need every cent we can get to keep our heads above water." Said Mr. McCormack: "There we stood shivering at a $1,000 outlay for a tremendous thing, when to-day there would n't be the slightest hesitation, I daresay, about putting $100,000 in some new engine out at Ensley." Mr. Barton says:

"Mr. Baxter agreed to a trial being made. No money was then available for any structural alterations. The tuyeres were, however, drawn back on one of the old furnaces on which it was decided to make the experiment, so as to increase the diameter of the hearth, while some increase of blowing power was obtained at the expense of the other furnaces. A heavy burden of lime

was put upon the furnace, and then began a weary time for all those connected with the Ensley division. There was no difficulty in the making of iron sufficiently low in either sulphur or silicon. But to get them both to the required limit at the same time was found to be very difficult.

"A quantity of iron was, however, made just above the limit, and this was unsuitable for either foundry or basic purposes and then unsalable. For weeks the place was like an inferno, but every one had determined to see the matter through if it was at all possible. The varying character of the material was the chief cause of the trouble, and the seat of operations was at length transferred to the Alice furnace, over which I then had general supervision and where there were better facilities. A quantity of ore of known chemical composition was first collected there, and dolomite substituted for limestone as flux, in order to keep the basic slag as fluid as possible, and after the experience gained at Ensley a cast of iron was obtained at the third attempt which met all the requirements of the specification, and the furnace kept on making such iron cast after cast without much trouble, under the watchful eye of Mr. John Shannon, the then furnace manager at Alice."

According to Mr. Bowron's notes this basic metal pig iron was cast in sand at the Alice furnace, July 22, 1895. Chilled basic iron was cast in metal molds a few weeks later, August 15, and the following week the sale was made to Carnegie through the commission house of Matthew Addy and Company of Cincinnati. This was subject to a test of the first four thousand tons. It proved satisfactory, and the full amount of twenty-five thousand tons was ordered, and by October of 1895 the Tennessee Company was selling basic pig iron to the Carnegie people, the Illinois Steel Company, and various large Pittsburg firms.

"The value of this action of George B. McCormack's to the Tennessee Company at this time, and in fact to the whole district, was incalculable," said Mr. Baxter. "It saved us from eventually going into the hands of a receiver. It opened up a market that otherwise we should not have had; it kept our furnaces in blast, and it led the way to our export trade. It doubled — I may say trebled — the value of every man's coal and iron ore properties in the State, besides our own, and, furthermore, it was this, and this alone, that ushered in the steel making era of Alabama."

CHAPTER XXVI

AFFAIRS OF BIRMINGHAM DISTRICT 1890–1909. BIRMINGHAM COAL AND IRON COMPANY. DIMMICK PIPE COMPANY. SOUTHERN IRON AND STEEL COMPANY. SLOSS-SHEFFIELD STEEL AND IRON COMPANY

Organization of Tutwiler Coal, Coke, and Iron Company. Foundation of Birmingham Coal and Iron Company. Development work inaugurated by Major Tutwiler, Morris Adler, and E. L. Adler. Trade with the Birmingham Coal and Iron Company. Career of Edward M. Tutwiler. Construction of Georgia Pacific Railroad. Purchase of Coalburg properties from John T. Milner. Retirement of Colonel Milner. Sloss Company acquires Coalburg. How Major Tutwiler managed strikes. Formation of Dimmick Pipe Company. Biographical sketch of J. K. Dimmick, "the Dean of the Cast Iron Pipe Business." "How destiny hung on a ferryboat ride." Biographical sketch of Fred Dimmick, president of Dimmick Pipe Company. Organization of Alabama Steel and Wire Company, 1898. Growth of company. Acquisition of Underwood properties in Blount and Etowah counties. Merger with Lacey-Buek Iron Company (1906). Former officers and directors of Southern Steel Company. Backward glance into records of Lacey-Buek Company. Biographical sketch of C. E. Buek. Unwise policy of consolidated company brings it into hands of receiver. Extraordinary resurrection of bankrupt concern. Capital and legal genius applied to bring company to life. Personnel of committee on reorganization. James T. Woodward, president Hanover National Bank, R. B. Van Cortlandt, W. W. Miller, and Cornelius Vanderbilt among strong New York group. Plan of reorganization. Chairman of Board of Trustees elected president of Southern Iron and Steel Company. Officers of new management. Biographical sketch of W. P. G. Harding. Review of W. H. Hassinger's career. Sketch of James E. Strong. Capitalization of new company. Location of properties in three States. Formation of Sloss-Sheffield Steel and Iron Company. Résumé of its history. Truman H. Aldrich enters service of company. John Campbell Maben of Virginia elected president in 1902. Connection of Maben family with the colonial iron-master, Lieutenant-Governor Spotswood. Appointment of John Shannon as general superintendent of blast furnaces. Jones G. Moore made manager of mines. Sketch of vice-president J. W. McQueen. Interesting association of McQueen family with old Scottish Chiefs.

THE years following the panic of '93 were exceedingly active in the Birmingham District. Many new coal and iron companies were formed and old ones were reorganized. The Tutwiler Coal, Coke, and Iron Company, parent stock of the present-day Birmingham Coal and Iron Company, was one of the successful concerns starting

operations about this time, being organized in November, 1893, by Major Edward Magruder Tutwiler. Like the Woodward Iron Company it went in for legitimate development work on a quiet, steady scale, and became a money-making enterprise from the start. In 1897 the blast furnace Vanderbilt, then just recently erected, was acquired by Major Tutwiler, together with thirty-six thousand acres of coal and ore properties, sixteen thousand acres of which contained the Pratt Seam of coal. A minority interest in the company was bought three years later by Morris Adler and E. L. Adler. Morris Adler became vice-president and E. L. Adler general manager, while Major Tutwiler continued as president. The Adler brothers brought in additional mineral properties to the extent of twenty-eight thousand acres. The company also acquired about this time the iron ore lands known as the Songo mines on Red Mountain near Bessemer, which property was originally purchased, as has been related, by Daniel Hillman, Jr., from Major Peters shortly after the Civil War. These mines, and the company's coal mines at Murray and Short Creek, were then developed by Major Tutwiler, batteries of coke ovens were built, and washers and modern machinery installed.

In 1906 the Tutwiler Coal, Coke, and Iron Company sold out to the Birmingham Iron Company. This latter company, together with the Birmingham Coal Company, originally chartered under the laws of New York, was closely allied with the Atlanta, Birmingham, and Atlantic Railroad, of which H. M. Atkinson is president. After acquiring the furnace plant and mineral properties of the Tutwiler Company, it was reorganized as the Birmingham Coal and Iron Company.

At the time of the formation of his old company, in 1893, Major Tutwiler had been in the Birmingham District precisely ten years. His business was originally civil engineering. When he first put up at the old Relay House he was assistant chief engineer of the Georgia Pacific Railroad, which was being built by the Richmond and Danville Construction Company. Early in 1881 some thirteen thousand acres of mineral lands belonging to the Milner Coal and Railroad Company were purchased by the Richmond and Danville people, and Major Tutwiler was appointed superintendent of the properties. This company had been organized by John T. Milner in 1879; one mine had been opened on the Pratt seam, and nine miles of railroad (now incorporated in the Southern system) had been constructed by

Colonel Milner. Following the sale, which brought a clear profit of over $200,000 to Colonel Milner, he retired from active operations to his home at Newcastle, devoting his time mainly to the development of the Newcastle mines, and to study and writing.[1]

The Georgia Pacific track was finished up to the old Milner properties, which meantime had been reorganized as the Coalburg Coal and Coke Company in 1883, and the work of developing the mines at this point was entrusted to Major Tutwiler.

"At that time I had no notion of investing personally in any mineral lands," said the major, "and, in fact, not for several years afterwards. I did not know anything about mining coal then, but I got me some men who did."

By the end of two years the output of the Coalburg group was brought up from one hundred twenty-five tons per day to four thousand tons. Mines were subsequently opened under Major Tutwiler's supervision at Brookside, Blossburg, Cardiff, and Brazil. The major's twelve solid years in the engineering business came now into good service. "The only difference was that

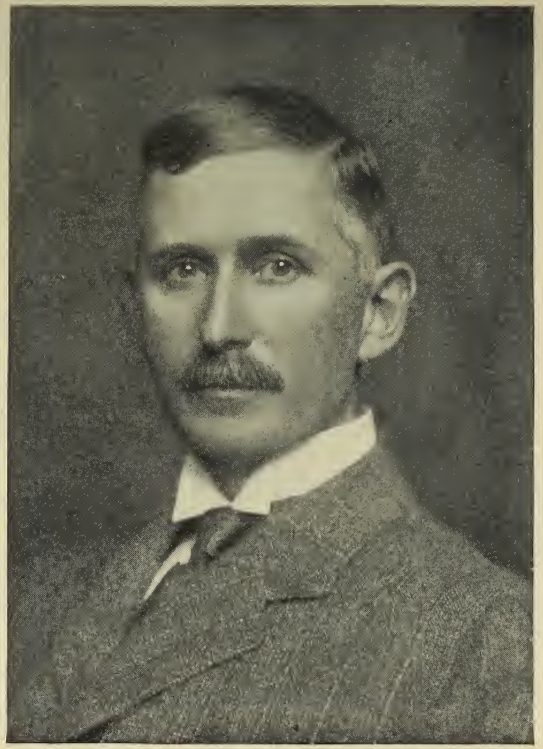
[1] A quarter of a mile from the mines at Newcastle John T. Milner established his home. His granddaughter, Bessie, said in regard to the Milner home here: "It was an old-timey one-story house. No one person could ever have built it, I think. It rambled everywhere all over the grounds. There was a step up and a step down, every which way, and long corridors and rooms off to themselves. When I was little I used to wonder how things kept hot coming all the way from the kitchen to the dining-room. The house stood near the road. On the right-hand side grandmother had her rose garden, and the other flowers on the left, some oak trees, and on the small front veranda, which had side lights, I remember grapevines and wistaria. None of it was ever painted. We children always called it 'The House.' Our playground was a stretch of uncultivated field near the orchard and the rose garden. Our small houses were beyond grandmother's little kitchen garden. Then there were barns and a smoke house and the kitchen built outside."

In 1886 John T. Milner represented Jefferson County in the State Senate and directed his efforts to secure a bill to encourage immigration.

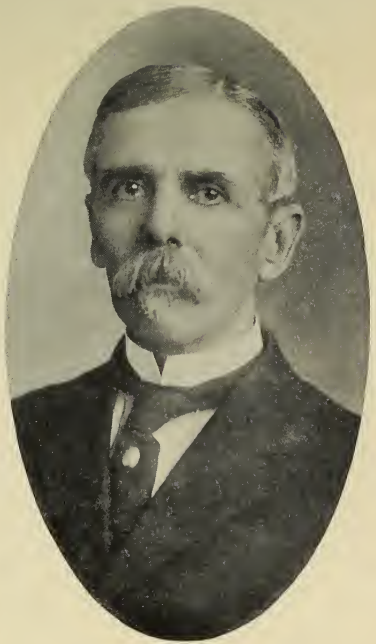
He served the State Senate until 1894, Jefferson County having a feeling of security in his loyalty and sensible standards.

Miss Milner said: "He was big in little things, never fussy, but placid, reserved, practical. He would visualize, could see Birmingham amongst cow-paths. He had big powers of mind and great concentration. He was the same at home as elsewhere, the same to everybody. He did not keep his big and best ways for strangers, but for us at home. He had a fierce temper, but it was held well in check. He had sound and solid convictions. He was interested in his children and in their children; formulated their ideals of conduct and advocated sensible doings. He made everybody comfortable and happy." He died at Newcastle in 1898. His children living now in Birmingham are Henry Willis Milner, Mrs. C. P. Orr, and Mrs. James Weatherly.

EDWARD M. TUTWILER
Founder of Tutwiler Coal, Coke, and Iron Company



JOHN A. TOPPING
Chairman Executive Board of Republic Iron and Steel Company



EUGENE A. SMITH
State Geologist of Alabama

I now had to do underground what I'd been accustomed to doing above ground, that was all."

The steady development work in this locality soon attracted the notice of the Sloss Iron and Steel Company, by whom the entire group was purchased in 1887. Major Tutwiler then entered the service of this company as superintendent of mines, resigning, however, in 1889, to go into business for himself. He continued to operate the same mines, under lease from the Sloss Company. Meanwhile, he had been gradually acquiring a large acreage of valuable coal and iron ore lands on his own account, so that by the time he was ready to organize the Tutwiler Coal, Coke, and Iron Company, he had in hand a pretty fair property, and had become himself one of the strong men of the Birmingham District.

Edward M. Tutwiler belongs to one of the old Virginian families. He was born on October 13, 1846, at Palmyra, Fluvanna County, Virginia. His father, Colonel Thomas H. Tutwiler, a member of the State Legislature from that county, served as Commonwealth's attorney for a period of twenty-five years. His great-grandfather Shores took part in the Revolutionary War, and as was noted in an earlier chapter, E. M. Tutwiler's grandfather, Martin Tutwiler, was a soldier in the war of 1812, as were Sloss, Rhodes, Underwood, and a number of other men, whose sons and grandsons have become identified with the industrial development of Alabama.

After six years at the Palmyra School, E. M. Tutwiler entered the Virginia Military Institute in 1864 and took up the civil engineering course. His great-uncle, Henry Tutwiler, who was then a prominent figure among the educators of Alabama, and whose daughter is Miss Julia Tutwiler, had a professorship at the University of Virginia early in the eighteen-thirties. During the Civil War Thomas H. Tutwiler was out in the field, as were all the other Virginians, and young Tutwiler himself did not have to keep back from the firing-line. He was a member of that corps of Volunteer Massachusetts Infantry cadets who, two hundred strong, marched out in the spring of '64 at Breckinridge's call to halt the Federal's advance up the valley of Virginia. Fifty-three of those lads fell in that battle at Newmarket.

Young Tutwiler served at the front until Appomattox. Then he took up his college work where he had left off, was graduated in 1867, and set out to earn his living. In lieu of an engineering

job, he tutored for a time just as Michael Tuomey had done before him. He tutored two healthy young grandsons of old Commodore Jacob Jones up in Cecil County, Maryland, "and," says the major, "pretty good training I got!" In 1869 the job he was looking for turned up. He became a rodman in the engineering corps of the Lehigh and Susquehanna Railroad. Within the next ten or twelve years he was connected in various capacities from locating engineer to chief engineer with the Chesapeake and Ohio Railroad, the Cincinnati Southern, the Miami Valley Railroad, Richmond and Allegheny Railroad, and at length with the Georgia Pacific. It was Tutwiler who located the eastern end of the Chesapeake and Ohio, from Richmond to Newport News in the early seventies. In 1879 he served for a year as assistant city engineer of Cincinnati. When acting as division engineer in charge of the construction of the mountain division of the Richmond and Allegheny, from Lynchburg, Virginia, to Lexington and Clifton Forge, he brought down into his old college town its first railroad and directly afterwards he became associated with the Georgia Pacific Railroad, and set out for Alabama.

Among the men Major Tutwiler engaged from time to time in the working of his mines and the Vanderbilt furnace plant were James Hillhouse, Sr., William Goold, and John Shannon.

Mr. Hillhouse was an Ayrshire boy, born in Scotland in 1845. He entered Alabama in 1883, after having seen several years of service in the anthracite coal region of Pennsylvania. He was connected with the Brierfield Coal and Iron Company and with mining work in the North Birmingham District, the Coalburg region, and the Blue Creek mines in the old days when the Cahaba Coal Mining Company and the DeBardeleben Coal and Iron Company ran the country. In 1902 Mr. Hillhouse was appointed associate mine inspector of Alabama. He worked several years with the Tutwiler Company.

Major Tutwiler himself stayed right along with his works at Coalburg, lived at the camp day in and day out, a good long while. "We all on us thought a heap of de boss," said an old colored mammy, Viney Grissom by name. "When my ole man got hurt in de Coalburg mines, Major Tutwiler he done gib me house rent free. He used to 'ten' all de meetin's reg'lar. When dey was strikes comin' on, you know, an' de black legs would all be gettin' togather out in de pines, de boss he 'd up an'

gwine jine 'em. He never miss a meetin'. He follow 'em up close, an' he never made no fuss 'bout nothin'; he jes' set hisself down in de meetin's midst white folks *an'* black, an' lisen to what dey all got to say. Then he stan' up an' say what he got to say, an' n'ary a one, white man or nigger, could keep on strikin' s'long as de major he done dat away. He jes' did n't gib 'em no chance to quit working fo' him."

Although the major retired from active service when he sold out to the Birmingham Iron Company, he remains a citizen of Birmingham and is interested in various lines of civic enterprise.

Among other important companies incorporated in Alabama at this period (1898–1900) were the Dimmick Pipe Company, the Alabama Steel and Wire Company, and the Lacey-Buek Iron Company, the two latter making up, with subsidiary companies, the great Southern Iron and Steel Company of the present day.

The Dimmick Pipe Company was incorporated in 1899 with a capital stock of $200,000. Its founder was J. K. Dimmick, known to the iron fraternity as "the dean of the cast iron pipe business." Just prior to his entrance into the industrial field of the Birmingham District, Mr. Dimmick had been acting as vice-president and general manager of the large pipe works at Anniston, Alabama, now owned by the United States Cast Iron Pipe and Foundry Company. He has been associated in pipe manufacture in seven different States ever since his early boyhood days when he got his first tuition in the iron and cast iron pipe business at a New Jersey foundry and machine company, long before the Civil War. He is of Pennsylvania-Dutch stock and was born in Northampton County, March 19, 1846. Being left an orphan he began at a very early age to shift for himself. At the close of the Civil War, in which he served, by the way, throughout the full four years in the Union Army, he started South with the idea of engaging in business at Nashville, Tennessee. A story related of this trip is here given.

"Mr. Dimmick began his journey for Nashville and stopped off at Cincinnati. The sight of the big Ohio River, together with its enormous traffic, attracted him, and he sauntered to the river side to satisfy his curiosity. He boarded the ferryboat that traversed this river between Cincinnati and its suburb across the way, which particularly interested him. On the other side he noticed on the banks of the river at Newport, Kentucky, what appeared to be a foundry, and also a cast iron pipe foundry as

well. He visited the plant, and then and there was the beginning of the Gaylord Iron and Pipe Company and the first cast iron pipe foundry erected west of the Alleghenies.

"That ferry ride across the river had a great deal to do with the career of Mr. Dimmick. It resulted in his engaging with the Gaylord Company and abandoning his trip to Nashville. He rapidly rose in his new position to the general manager of the entire plant, and he was still a very young man. Here he remained for many years and made a great success of this company. In the early eighties he visited the iron district of Alabama and was then impressed with its future, and constantly predicted that some day the State of Alabama would rule the iron and steel business of this country."

Mr. Dimmick did not, however, take a very great fancy to early Birmingham as a place of residence. He was one of the thousand and one lodgers of the old Relay House. He thought he had "rather not pioneer it" just then, so went back to Virginia, where he erected a pipe plant at Radford.

In 1889 he organized a company that took over the defunct cast iron pipe shop at Anniston, Alabama, and here he did some record-breaking work. When the amalgamation of this Anniston Pipe and Foundry Company and the American Pipe and Foundry Company of Chattanooga (a concern representing some four or five cast iron pipe plants in the South) occurred, in 1897, Mr. Dimmick practically became the head of the business. Two years later he established his plant in Birmingham and shortly afterwards retired from active service in the business world. His son, Fred Dimmick, who had been treasurer of the Dimmick Pipe Company at its organization in '99, stepped into his father's place as manager.

In 1902 young Dimmick was elected president, when he was scarcely twenty-five years old. But he had grown up with the business, and "knew it from a to izzard."

Fred Dimmick was born June 9, 1876, at Newport, Kentucky. He took a scientific course at the Ohio Wesleyan University and directly after leaving college started in his father's shops at Anniston. He took hold of the practical end and mastered all the details of the pipe business from "daubing the cores" and "ramming the molds" to the finished product ready for shipment. When his chance came to captain the big plant he was ready. The Dimmick Pipe Company, as has been stated, was merely in its infancy when he became president. He has

enlarged and modernized it and more than doubled its capacity during his seven years' management.

Having started with a small fifteen-acre space for shops and yard, and a capacity for manufacturing pipe solely from three to thirty inches in diameter, the plant now covers seventy square acres and with its various new shops and modern machinery and devices has facilities for making pipe as large as sixty inches in diameter, and, in fact, the company figures on any contract regardless of size. It now has a capital stock of $500,000; carries on its pay roll the names of four hundred and fifty employees; has an annual output of finished product amounting to fifty-five thousand tons of pipe, and commands a market throughout the southern and western portions of the United States and to points in Canada, West Indies, the Hawaiian Islands, and the Philippines. The present-day officers of the company are Fred D. Dimmick, president; James Bowron, vice-president;[1] J. R. Rice, general sales agent; John H. Goodapple, secretary and treasurer.

The Alabama Steel and Wire Company of Birmingham, Alabama, was organized and operated under the laws of Alabama by a special charter granted by the Legislature of 1898. Its capital stock of two millions was acquired shortly afterwards by the Alabama Steel and Wire Corporation of Hartford, Connecticut. The company started operations at Ensley, Alabama, during the Spanish War. It was the first company in the State and probably in the whole South to make wire rods, wire fencing of all kinds, and wire nails. It quickly extended operations and increased its mineral holdings by the purchase from time to time of a number of other coal and iron companies. The old Rising Fawn furnace of Georgia was purchased, together with an immense acreage of brown ore lands near Cartersville, and at length the Dade coal mine, the only coal mine in Georgia, was also bought. A valuable purchase to the company was a tract of several thousand acres of mineral lands in Blount and Etowah counties, originally prospected by William T. Underwood.

It seems that in 1897, Mr. Underwood, after selling out his Mary Pratt Properties, had gone up into the Racoon Mountain

[1] James Bowron, former vice-president, secretary, and treasurer of the Tennessee Coal, Iron, and Railroad Company and one of the builders of South Pittsburg, resigned from the Tennessee Coal Company late in the nineties and after a few years' rest and travel entered again into the business world of the South.

coal fields and spent three years in prospecting and proving up the Bynum, Carnes, and other seams which had been outlined by Professor Gibson, assistant State geologist, in 1893. Securing possession of three thousand acres of the best of these coals, Mr. Underwood arranged with the Louisville and Nashville Railroad Company to extend its Murphy's Valley Branch from Champion some ten or twelve miles on further.[1] He then opened the coal mines and founded the town of Altoona. He operated these mines with success, developing one of the most valuable fields of coal in the State, and changing that little known region into a populous and prosperous community. He gave the people, both in and outside of his camp town, schools and churches, encouraged them to establish lodges of Odd Fellows and Masons, and helped them in many ways. In October of 1904 he sold these Altoona properties to the Alabama Steel and Wire Company for $350,000.

The name of the Alabama Steel and Wire Company was changed in the summer of 1906 to the Southern Steel Company.

[1] Mr. Underwood writes concerning this matter as follows: "In the spring of 1900 I had secured control of a body of coal lands in western Etowah and Blount counties, and wanted to open mines. I wanted it badly, but my lands were many miles from a railroad, and I was not able to command one-third of the money needed. I preferred opening mines on that side of my property nearest to the Alabama Great Southern railroad, and took the matter up with the Southern officials, but got no encouragement. I then went to Mr. M. H. Smith and found no difficulty in arousing his interest in it. I remember his saying to me: 'If you have the quality and quantity of coal you think you have, I will build you a road.' I then explained that I could not raise more than a third the money needed for opening and operating the mines, and I asked him if he could aid me with that. He said he did not know but would see. He did not keep me waiting, but acted immediately. He made me haul thirty wagonloads of coal twelve miles for test purposes. He sent experts and proved the correctness of my statement as to quantity. He then arranged with a Louisville bank to loan my company many thousands of dollars, which we were allowed to pay off from our earnings. He began building twelve miles of road for us in May, 1900, and in the following October we were shipping coal over it. I started this business with but a few thousand dollars of my own, and within four years' time had paid about $80,000 for the land, paid off the banks, and sold the property for a very large sum, most of which money came from outside of the State and remains invested in Alabama. The country through which he built the road, and its extension on to Atalla, had been almost a wilderness. The population there has now increased ten times or more, and the city is prosperous.

"Other railroads had been asked to do this, but they did not. Had it not been for Mr. Smith's desire to extend the sphere of usefulness of his road, his comprehensive understanding of business men and their needs, as well as of railroads, and his personal inclination to help men with good propositions, that section of Blount and Etowah counties would still be asleep. To-day, and for fifty years to come, its mines can give a living to many thousands of people. . . . The prosperity of the people of the Alabama mineral district is very largely due to the liberal policy of M. H. Smith."

A few weeks later, in September, a complete reorganization of the company took place in New York City, when the absorption of two more companies occurred, namely, the Lacey-Buek Iron Company and the Chattanooga Iron Company. The capital stock of the Southern Steel Company was then said to be $25,000,000. At any rate, the company at once lined up along with the other great coal and iron corporations of Alabama in point of size.

Moses Taylor of the New York firm of Kean, Van Cortlandt and Company was elected president; C. P. Perin of New York, chairman of the board; E. T. Schuler of Gadsden, and C. E. Buek, vice-presidents; George H. Schuler, treasurer (but was succeeded later by A. R. Forsyth); E. F. Jones of Birmingham, general manager; R. D. Carver of Birmingham, secretary; S. R. Chenoweth of Birmingham, comptroller, and F. L. Reed of New York, assistant secretary. The general offices of the company were then located in Birmingham. All of the principal leaders in the new company, excepting the Lacey-Buek people, were the originators of the Alabama Steel and Wire Company. The board of directors comprised Oakleigh Thorne, Robert B. Van Cortlandt, J. D. Lacey, John Bindley, H. B. Schuler, and Cortlandt Van Camp. The officials were also members of the board.

The Lacey-Buek Iron Company, thus taken over by the Southern Steel Company in 1906, had been organized in 1900 by Charles E. Buek. Associated with him as founders and officials of the company was J. D. Lacey of Chicago and others.

Mr. Buek was born in Brooklyn, New York, in 1859, coming from German stock. He started his business career in one of the large exporting houses of New York, and was eventually stationed at Richmond, Virginia, in charge of one of the branch offices of the New York concern. He then entered into the foreign ship brokerage business, organized his own company, and built the first grain elevator in the South. He also engaged in the milling business, and later in the insurance business. He was general agent of the Washington Life Insurance Company when, late in the eighties, he located at Chattanooga, Tennessee. He at once became interested in the mineral regions of that State; he invested in various properties, and organized the Frictionless Metal Company of Chattanooga; and from then on until the present day has been engaged in launching first one

enterprise and then another. Upon his entrance into the Alabama field in 1900 and the organization of the Lacey-Buek Company, he purchased the Trussville furnace and all its properties.

This furnace was then a dead plant, — one of the relics of the boom times of that district, — "knocked out" as Fort Payne had been in the early nineties. Mr. Buek raised up this plant, and remodeled it into a two hundred-ton stack, and reconstructed the coke ovens. The ore properties of this concern bordered Will's Valley at the Crudup, historic ground. His company further owned brown ore properties in northwest Alabama and across the line in Georgia; dolomite quarries beyond North Birmingham; a coal mine at Graves, near Lewisburg, and a large acreage of undeveloped coal lands in the region of the Warrior River known as the Williams coal property. It was capitalized at $750,000, with a bonded debt of $500,000. Mr. Buek merged some of his Tennessee properties, the Chattanooga furnace plant, and the Estelle Mining Company (ore) into the Lacey-Buek.

Although the Steel Company's wire mill at Ensley (Jefferson County) was its pioneer plant, yet its most expensive plants were located by the Messrs. Schuler at Alabama City, in Etowah County, about two miles west of Gadsden. These plants consisted in 1906 of one blast furnace (designed by John Shannon), six open-hearth steel furnaces, and a blooming mill. Had the company concentrated on its steel mill and not branched off in so many different directions all at once, had its officers but realized the dearth of skilled labor in the South, and the fact that healthy industrial growth is a matter of time, the fall over the precipice might, perhaps, have been avoided.

As it was, the merger of this concern with more scattered and unorganized properties brought about a general state of disorder. There was no strong executive management, and the financial, executive, and operating ends soon became tangled. For a brief space the Southern Steel Company "was kept alive with oxygen," then it fell into a state of utter and complete collapse, and down into the pit it was plunged.

On the 24th of October, 1907, bankruptcy proceedings were filed and the company was placed in the hands of receivers. These receivers were T. G. Bush, president of Shelby Iron Company, Edgar Adler, J. O. Thompson, and E. G. Chandler. The receivers discontinued the operation of all plants and proceeded to collect the outstanding accounts of the company. In Feb-

ruary, 1908, the receivers were succeeded by trustees elected by the creditors, who were W. H. Hassinger, T. S. Kyle, and John E. Morris. The bondholders and collateral trust note holders of this company formed a committee on reorganization, with headquarters in New York. This committee was composed of James T. Woodward (president of the Hanover National Bank), chairman; Otto T. Bannard, Franklin Q. Brown, Robert B. Van Cortlandt, Walter T. Rosen, Cornelius Vanderbilt, and W. P. G. Harding, president of First National Bank of Birmingham, Alabama.

Frequent conferences held between this committee and the trustees resulted in the promulgation of a plan, dated May 15, 1908, of reorganization, under which the reorganization committee proposed to raise the sum of $3,500,000 for paying off the pressing indebtedness of the subsidiary companies composing the Southern Steel Company, and for rehabilitating the plants and providing working capital. This plan provided for the organization of a new company for the issue of new bonds to take the place of the old, and for new preferred and common stock, the old stockholders to receive a percentage of their former holdings in new stock, and the creditors of the old company were to receive fifty per cent of their debts in first mortgage bonds of the new company and seventy-five per cent in preferred stock in the new company.

This plan of reorganization was declared effective on February 15, 1908, and the properties of the old company were sold at bankrupt sale early in 1909, and were bid in by the reorganization committee. The company at once took hold of the properties and elected W. H. Hassinger president, with the following board of directors: James T. Woodward, Cornelius Vanderbilt, A. W. Thompson, K. K. McLaren, F. Q. Brown, R. B. Van Cortlandt, W. T. Rosen, C. S. Boughton, W. P. G. Harding, R. T. Wilson, W. W. Miller, W. H. Hassinger, W. B. Denton, C. A. Grenfell, T. S. Kyle, D. G. Boissevain.

Said W. P. G. Harding in regard to the reconstruction: "The reorganization committee was fortunate in securing as its attorney Mr. W. W. Miller of the law firm of Hornblower, Miller, and Potter. To his ability and untiring energy the success of the plan is to a large extent due. Messrs. Augustus Benners and E. K. Campbell of Birmingham representing the petitioning creditors and the trustees are also entitled to much credit for

their part in formulating a plan that received the applause of the creditors."

The new company was incorporated under the laws of New Jersey. Its name was changed to the Southern Iron and Steel Company and shares in its stock were first listed on the New York curb July 13, 1909.

Following close upon the heels of the recent panic the reorganization of this company created a stir throughout the business world not only of the South but of the entire country. It is one of the greatest events in modern industrial history, and, certainly, the most remarkable resurrection of a bankrupt concern in recent financial records of the United States.

Chief among the Birmingham men becoming interested in reviving the dying concern was, as has been mentioned, Mr. Harding, the president of the First National Bank of Birmingham. W. P. G. Harding is a native Alabamian, having been born in Greene County, Alabama. His father was Horace Harding who, with Colonel Alfred L. Rives, was one of the well-known civil engineers of early Alabama, and acted as general manager of the Mobile and Ohio Railroad in the service of the Confederate government. Later he served as superintendent of the Alabama and Chattanooga Railroad (now the Alabama Great Southern), and at length became one of the government engineers identified with the Warrior River work. W. P. G. Harding received his M. A. degree at the University of Alabama, 1881, and shortly afterward started work in the old Tuskaloosa Bank of J. H. Fitts and Company (now the City National Bank).

In 1886 young Harding came up to Birmingham and took the position of assistant cashier of the old Berney National Bank, and in 1894 became cashier. As paying-teller he saw "some arduous service," for it fell to him to put up regularly the pay roll for all the employees of a good many of the old-time companies, among them the great DeBardeleben Coal and Iron Company and the Central Georgia Railroad. In 1896 Mr. Harding resigned to take the place of vice-president of the First National Bank, and in 1902 he succeeded N. E. Barker as president, which position he has held continuously since. In adition to his recent active interest in affairs of the Southern Iron and Steel Company, Mr. Harding is a director of the Birmingham Railway Light and Power Company, and has served as a director of the Bessemer Coal, Iron, and Land Company, and as trustee in bank-

ruptcy in conjunction with A. W. Smith and James Bonneyman, for the Birmingham Coal and Iron Company.

The officers elected in the reorganized Southern Iron and Steel Company, all veterans in the coal and iron business, are as follows: W. H. Hassinger, president; Frank B. Keiser, vice-president and general manager; John Y. Brooks, general superintendent of rod mill; Joseph A. Durfee, general superintendent of steel plant and furnace; George P. Thornton, general superintendent of ore mines; James E. Strong, general superintendent of coal mines in Alabama; H. F. Geismer, Chattanooga, district manager, comprising Rising Fawn furnace, Cole City, Dunlap, and Chattanooga furnace; Charles A. Moffett, chief engineer; B. F. Tyler, purchasing agent in charge of commissaries; H. H. Knight, traffic manager; and Harry Lacey, chief clerk. Six of these officers — President Hassinger, Mr. Keiser, Mr. Strong, Mr. Geismer, Mr. Moffett, and Mr. Tyler — were former officials in the Republic Iron and Steel Company, and three of the new group — Mr. Brooks, Mr. Durfee, and Mr. Thornton — formerly served with the Colorado Iron and Fuel Company, and were also identified with various companies of the Birmingham District.

William H. Hassinger was born in New Orleans, Louisiana, in May, 1863, of German parentage. His father, Jacob Hassinger, emigrated from Germany early in the fifties and was first editor of a German paper in New Orleans, and later, president of the Germania Savings Bank and Trust Company of that city. W. H. Hassinger graduated in 1885 from the Van Rensalaer Polytechnic Institute in Troy, New York. His first position was that of chief chemist with the old Spang Steel and Iron Company of Pittsburg, the first people, by the way, to make uniform soft steel for boiler plate. Young Hassinger next served in the same capacity with the Youngstown Steel Company of Ohio. In the spring of 1887 he ventured into the Birmingham District, and, with his associates, among them D. M. Forker, he built the Alabama rolling mill at Gate City and began the manufacture of merchant iron. He also became identified, as has previously been stated, with the original Henderson Steel plant.

The Alabama rolling mill was in continuous and successful operation throughout the periods of depression under Mr. Hassinger's management until 1898, when the concern was sold to the Republic Iron and Steel Company. Mr. Hassinger was then placed by the directors of the great company in charge of all of

its Alabama properties as vice-president and district manager. He had then under his management the rolling mills, the Thomas furnace of the Pioneer Mining and Manufacturing Company, together with its numerous coal and iron mines and quarries. In 1906 Mr. Hassinger resigned from the Republic Company to manage his own growing business. Two years later he was nominated by the creditors of the Southern Steel Company as chairman of the board of trustees in bankruptcy, as has been mentioned, and in 1908 was elected to his present office.

The Southern Iron and Steel Company's general superintendent of coal mines, James Edward Strong, has had an interesting career. He is the son of an English mining engineer, and he first came to the Birmingham District in 1884. He was born at Plymouth, England (1864), and after attending the Plymouth schools was taught the trade of carpenter and joiner. During the seventies and eighties the mineral region of Alabama was advertised all over Great Britain. Drawn by the romantic descriptions, young Strong came across to the States and made at once for the coal mines of the Birmingham District. "Birmingham was not then the place I pictured," said he.

At Pratt mines Colonel Llewellyn Johns, then chief mining engineer under Colonel Ensley, gave the English youth his first job, — that of a carpenter in the company shop. He shortly afterwards made him assistant surveyor of the mines. When Johns resigned from the office to go with the DeBardeleben Coal and Iron Company he took James Strong with him, and gave him the position of assistant superintendent of the Blue Creek division. While working here young Strong saved enough out of his salary to resign in 1888 and take a two-years' course in mining and civil engineering at Lehigh University. He then returned to Alabama, and in 1890 entered the Cahaba Coal Company (of which Truman H. Aldrich was then president) as superintendent of mines of the Excelsior Coal Company division at Gurnee. Shortly after this he went to Europe and to South Africa to investigate foreign methods of mining, and returned to Alabama to his old position. When the Gurnee mines were closed down in the strike of 1894, Mr. Strong was appointed general manager of the Montana Coal and Coke Company, in which W. J. Gurnee of New York had controlling interest. He remained in the far Northwest until 1899; he then tried Virginia for a time, serving as mining superintendent with the

Virginia Coal and Iron Company. Late in 1900 Mr. Strong returned to Alabama, accepting the position of mining superintendent with the Republic Iron and Steel Company. He became general superintendent, and then, in 1906, resigned to take the office of superintendent of both coal and ore properties of the Southern Steel Company, then the Alabama Steel and Wire Company.

The company's properties, in addition to the Gadsden plant, are located in three States, — Alabama, Georgia, and Tennessee. President Hassinger is preparing to remodel and put in operation all the various plants. He will build a modern wire and rod mill at Gadsden, adjoining the company's steel plant, as well as finishing plants for the consumption of the mill's products. Although Birmingham will continue to be headquarters of the company, the manufacturing operations will be concentrated at Gadsden.

The reorganized Southern Iron and Steel Company has been thoroughly financed. Its capital stock is $27,000,000 ($7,000,000 preferred, $10,000,000 common stock, and $10,000,000 bonds).

To again trace back to the year 1899 another important event comes to pass, — the formation of the Sloss-Sheffield Steel and Iron Company, the second largest producer of pig iron in the Birmingham District. This great company was formed in August (1899) by a consolidation of the Sloss Iron and Steel Company, with twelve other smaller concerns, including Lady Ensley Coal, Iron, and Railroad Company, Franklin Mining Company, Lady Ensley Furnace Company, American Coal and Coke Company, Loss Creek Coal Company, Walker County Coal Company, Russellville Ore Company, Hamilton Creek Ore Company, Colbert Iron Company, Philadelphia Furnace Company, Miss Emma Ore Mining Company, and North Alabama Furnace Company.

Certain of the various and widely scattered holdings of this consolidated company have their origin, as has been shown, in territorial Alabama. Linked with the company's history are the names of Andrew Jackson's men, Major William Russell, and the old machinist David Hanby. Later are those of several of the pioneer prospectors and big mining men of the Birmingham District, including Major Tom Peters, John T. Milner, H. F. DeBardeleben, T. H. Aldrich, J. W. Sloss, Mark Potter, Enoch Ensley, Edward M. Tutwiler, and Milton H. Smith. In 1909 this com-

pany owns about sixty-five thousand acres of coal lands, fifty-three thousand acres of ore lands, seven blast furnaces, with raw material developed sufficient to supply them all. The company has outstanding $2,000,000 worth of six per cent bonds, $2,000,000 in four and a half per cent bonds, $6,700,000 of preferred stock, and $10,000,000 of common stock. The interest on the bonds and seven per cent on the preferred stock has always been paid since issued, and since 1905 dividends on the common stock at the rate of five per cent have been paid. Of the company's seven blast furnaces, four are located in the neighborhood of Birmingham and three in the Sheffield District. It has twelve fully developed coal mines, ore mines on Red Mountain, and a large brown ore development near Russellville, Alabama. After the expenditure of a large sum and the payment of dividends on the stock, the company has accumulated a surplus of about $3,000,000.

The records of the old Sloss Furnace Company, parent stock of the Sloss-Sheffield, and the account of its purchase and reorganization in 1886–87 as the Sloss Iron and Steel Company, have been detailed, together with the administrations of Joseph F. Johnston and Thomas Seddon. Sol Haas succeeded to the presidency of the company in 1896, upon the death of Mr. Seddon. His assistant and manager of mines was Truman H. Aldrich.

It seems that Mr. Aldrich, after his essay into politics, had returned to the coal business as a sailor to the sea. He had with P. B. Thomas organized the Southern Mining Company and opened and operated the mines at Hargrove. These he sold in 1903 to D. Pierson, Jr., and associates. While in the service of the Sloss-Sheffield Company, Mr. Aldrich frequently acted as president, and on August 3, 1900, he was elected as acting president, resigning in 1901, when a fourth reorganization was effected and E. O. Hopkins became president. Mr. Aldrich then got together a large amount of coal lands in the lower part of Jefferson County, which he named the Virginia mines, and sold them later to the Alabama Steel and Wire Company. The following year he organized, with his son, T. H. Aldrich, Jr. (a Perdue University graduate, class of '99), the Hillabee Gold Mining Company in Tallapoosa County, which in 1909 he is still operating. In 1905 Mr. Aldrich, together with P. B. Thomas, repurchased his first coal mine, — the old Montevallo mines, — which he had sold to his brother, W. F. Aldrich. He is to-day

president of the Montevallo Coal Company, and is operating those well-known mines, old landmarks of the coal business of Alabama, on a larger scale than they were ever operated before.

Confronted still with a large debt, the acquisition of vast new properties that, raw and crude, called aloud for capital, the Sloss-Sheffield Company had stiff problems up before its board. The blast furnaces, built by Colonel Sloss, had been pulled down by Mr. Seddon and new ones put up. But by 1901 they were far from making good. Another crisis loomed ahead of the company. John C. Maben, who for a long while had been chairman of the executive committee, and who had been actively interested in the company ever since the year of its organization in 1887, was elected president in May, 1902. Mr. Maben was no more of a coal and iron man than Tom Seddon had been. But he had proved on Wall Street that he was a financier. When he was elected to the presidency the officers and directors were: first vice-president, Joseph Bryan; second vice-president, E. W. Rucker; secretary and treasurer, J. W. McQueen; auditor, E. J. Thomas, Jr. Directors: J. C. Maben, Joseph Bryan, E. W. Rucker, W. H. Goadby, H. O. Seixas, A. B. Andrews, Moses Van Cortlandt, John A. Rutherford, Richard Mortimer, George Parsons, W. G. Oakman, A. H. Larkin, and W. E. Strong.

As to John Campbell Maben, he is a Virginian, like Tom Seddon. Of Scotch-English stock, he is descended on his mother's side from the early iron maker of the American colonies, Lieutenant-Governor Alexander Spotswood, called by Colonel Byrd the "Tubal Cain of Virginia." [1]

Mr. Maben's father, John Maben, was a cotton and tobacco merchant of Richmond, Virginia. He had married Elizabeth Moore Campbell of Petersburg, great-granddaughter of Catherine Spotswood Moore, who was the daughter of the distinguished iron-master and administrator of Colonial Virginia. The Maben home, like so many of the old Virginia estates, carried an English name; it was called after Horace Walpole's "Strawberry Hill." Here, on December 31, 1839, John Campbell Maben was born. The family moved later to Richmond,

[1] Records of the early iron works at Germanna, established by Governor Spotswood, are preserved in the Westover manuscripts in the Virginia archives. They make the first chapter of that State's history of iron making, but are still unpublished. Some of the products of Spotswood's historic iron works are still preserved by several of his descendants, living in old Orange County.

and the boy was educated in the public schools of that city, and there prepared for Princeton, entering that university in 1859. Just as Benjamin Hawkins, almost a century before (the first man to be identified with industrial Alabama in territorial days), had left Princeton, to enter the army of the American Revolution, so young Maben also left Princeton before his graduation for the battlefield. Enlisting in the ranks of the Richmond Greys, Twelfth Virginia Regiment, which was the first company to enter the service of the State of Virginia, young Maben was, after two years' service, commissioned as captain. Assigned to duty on the staff of the First Army Corps of northern Virginia, he served in the field until his parole at Appomattox. After the war, finding Richmond but a bankrupt place and holding out no fruit for enterprise, Captain Maben set forth for New York in 1868 and went into the banking business, and from that into the Wall Street office of Lancaster, Brown, and Company. This firm, officered by Virginians, dealt mainly in Southern affairs, and turned the currents of influence and capital in its control to force new life into the prostrate Southern country. It started the construction of the Mississippi levees, and built or partly built in the South numerous railroads.

In 1871 Mr. Maben married Miss Merchant, the daughter of General Charles S. Merchant of the United States Army.[1] While Captain Maben and his bride were abroad on a European tour his firm failed in the panic of 1873. Captain Maben returned, settled up the affairs with his firm, and began business alone. He was one of the original projectors of the Richmond and West Point Terminal Railway and Warehouse Company (now the Southern Railway Company), and remained a director of that company until its reorganization after the disastrous panic of 1893, and was one of a committee of three selected by the stockholders to look after its reorganization. He was also director in many other companies. He was on the board of the Georgia Pacific Railway at the time it was being built from Atlanta to Greenville, Mississippi, and aided materially in financing the enterprise. He also invested in coal properties in West Virginia, and became a stockholder and director in various manufacturing and commercial enterprises, among them the

[1] General Merchant was in the first class which was graduated from the West Point Military Academy and was a conspicuous figure of the United States Artillery Corps, having been active in the construction of the coast defences at Savannah and Old Point Comfort, Virginia.

Lanston Monotype Machine Company. By the eighties he had accumulated some means of his own and commanded a certain degree of capital and influence on Wall Street. His taking stock in the affairs of the Sloss Furnace Company brought the interests of a number of solid men to bear on its welfare. As has been mentioned, when Mr. Maben was elected president, the Sloss-Sheffield Company was facing a crisis similar, almost, to that of Seddon's day. With thirty-four years' experience on Wall Street back of him, President Maben brought to the handling of the concern a sharp-pointed memory for figures and statistics and a firm grip on the financiering end. One of his first steps was to place the practical furnaceman, John Shannon, in charge of the blast furnace department. Jones G. Moore became manager of mines. Vice-president McQueen had charge of the contracting and sales departments and handled the general affairs of the company.

"I 'm not a technical man," says Captain Maben, "and I don't pretend to be one. I 've no need to be one. All I want to take care of are these cost sheets right here and look after results, and see that results show up. That 's what I 'm here for. Why should I be a mining engineer or a coal and ore expert? Jones G. Moore takes care of my mines. Why should I need to learn how to build and run a blast furnace? John Shannon takes care of my furnaces. If anything is wrong it shows right here in these reports, and I call up the men in charge and see what 's the matter and have it corrected. That, in my opinion, is the only way to run a company."

By the close of 1905, the company's statements showed that "it stood without any floating indebtedness and was paying five per cent dividends on common stock and had paid seven per cent on preferred since August, 1899. Its resources are said to aggregate $21,000,000, with a surplus and working capital amounting to $2,500,000, with its annual net earnings increased over $1,400,000."

The general superintendent of the company's furnaces, John Shannon, has worked up through every phase and condition of the furnaceman's trade. His father was the English foundryman, James Shannon, so long connected with the Birmingham District, and John Shannon was born and bred to the trade. He began as a little water boy back in Colonel Sloss's time (in 1878); his next job at old Oxmoor was off-bearing brick from

the yard; then he got work in the stock house there. Later he went up to Alice, where at the battery of coke ovens "daubing doors" was his end of the work. At Sloss and at Mary Pratt it was "cinder-snapping," with terms at the public school every now and then. Mr. Underwood also employed the boy as shipping clerk at Mary Pratt and assistant to the bookkeeper, young Reuben Edwards, Giles Edwards' son. The position of labor foreman at the Bessemer furnaces was next gotten by Shannon; then that of foundryman and assistant superintendent to Llewellyn Johns, where he was given sole charge of the Little Belle blast furnace. Here was where young Shannon had his first show. The Little Belle having but one engine and three stoves did not average more than sixty tons per day output. John Shannon created a sensation in Bessemer when he broke the Little Belle's record with a ninety-two ton output. And he continued to keep the furnace up to a seventy-five-ton average daily. After this the eye of "Boss" DeBardeleben was on him. When DeBardeleben absorbed the Eureka Company he appointed John Shannon superintendent of the Eureka furnaces, and the young man returned to Oxmoor where he had begun as a barefooted water boy. He made good there and one promotion followed another. In 1893, after the deal between the Tennessee Company and the DeBardeleben Coal and Iron Company, John Shannon was detailed by DeBardeleben to the Big Four at Ensley. These furnaces were not then behaving well. The output of each did not average more than one hundred and twenty tons per day. Returning from Wall Street, "broke," DeBardeleben decided to reform the Ensley stacks. So he engaged John Shannon, who worked night and day until he set things to rights. He overhauled the engines and boilers; watched the stacks pretty close, and within precisely two weeks the output of the two furnaces he had in operation increased to two hundred tons per day. DeBardeleben was elected general manager and Shannon got a raise. Early in the winter of '95 Mr. Barton transferred Shannon to Alice, and made him superintendent there. It was on the Alice record that Shannon was promoted by General Manager McCormack to Barton's place as superintendent of Ensley, in 1898, when Mr. Barton returned to England. In the following year Mr. Shannon accepted a position with the Southern Steel Company as general superintendent of construction. He designed and built his first furnace, the Schuler

plant at Alabama City. Mr. Shannon was also engaged as consulting engineer by the Tutwiler Coal and Iron Company, and by the Sloss-Sheffield Steel and Iron Company, where he became, at the expiration of his contract with the Southern Steel Company, as has been noted, general superintendent of furnaces. He has in 1909 under his management the seven blast furnaces of the company at Birmingham, Sheffield, and Florence, and a regiment of twelve hundred men.

The twelve coal mines of the company are under the direction of Jones G. Moore. They are located upon productive and easily worked seams. Those in Jefferson County are at Coalburg, Brazil, New Found, Cardiff, and Blossburg on the line of the Southern Railway. The Coalburg properties, the oldest mines of the company, were originally owned by John T. Milner and developed by Edward M. Tutwiler. They lie twelve miles west of Birmingham. Still farther west are the mines at Brookside, Brazil, and Cardiff. Mr. Moore has seen more than twenty years' service in the coal business of the Birmingham District. His work in connection with the Pratt Coal and Iron Company under Enoch Ensley has been noted. He remained in the Pratt mines division after the merger with the Tennessee Company, and during the strike of 1894 handled his work with a special degree of efficiency. He took a hand in politics for a time, and served as State senator from Bibb and Shelby counties. He left the Tennessee Company to become president of the Birmingham Southern. In 1906 Mr. Moore entered the Sloss-Sheffield Company, succeeding Thomas C. Culverhouse as manager of mines.

The brown ore mines of the company were acquired, as has been related, in 1899, from the Russellville Ore Company, the Franklin Mining Company, the Hamilton Creek Ore Company, and the Lady Ensley Coal, Iron, and Railroad Company. The fields are located about twenty miles from the furnaces of the company in the Sheffield District. The company has two extensive limestone quarries, one at North Birmingham and the other near Russellville. The hard red ore mines are located in Jefferson County. One of the most extensive of this class of mines is at the Sloss, Alabama, on Red Mountain, seven miles south of Birmingham. Two slopes tap a vein of ore from twelve to fifteen feet in thickness and the output is twenty-five hundred tons daily. The mines were opened by the old Sloss

Company under John David Hanby's direction and have been worked steadily for twenty-seven years. Captain Hanby, whose connection with the iron business dates from the old Irondale furnace days, is still superintendent at this point. The other ore mines are located at Irondale and Champion. The Champion mines in Blount County, discovered by old Hanby in Andrew Jackson's day, are owned jointly by the Sloss and Tennessee companies.

The entrance of James W. McQueen into the Birmingham District occurred in 1890. The incident that led to his start with the Sloss people, during "Tom" Seddon's administration, has been related in an earlier chapter.

Although born in South Carolina, at "Society Hill," April 15, 1866, James W. McQueen was reared in Alabama. He started out in life just as M. H. Smith, George B. McCormack, and Don Bacon had done, as a telegraph operator. He was first in the employ of the Alabama Great Southern and was stationed at Eutaw, Alabama. In 1886 he became joint agent for the Alabama Great Southern Railroad and the Cahaba Coal Company, officered by T. H. Aldrich and Colonel Cadle, and was stationed at Blocton and at Woodstock where Giles Edwards and his family lived. In April, 1899, Mr. McQueen married Lydia, a daughter of Giles Edwards, and shortly afterwards removed to Birmingham, and entered the ranks of the Sloss Iron and Steel Company. Young McQueen had charge at first of the transportation and shipping interests; then he was auditor until 1896, when he was promoted to the position of secretary and treasurer. From that date he has been in entire charge of the contracting and sales of pig iron. The contracts for all heavy purchases, and every sale in the company's history for twelve years, have been engineered by Mr. McQueen. Since 1902, when he became vice-president of the Sloss-Sheffield, Mr. McQueen has frequently served in administrative capacity and in Mr. Maben's absence he has had the control of the company. Owing to his long term of service, nearly twenty years all told, Mr. McQueen has a more intimate knowledge of the company's affairs than possibly any other of its officers. His good judgment, progressive attitude, and practical ability have helped his company keep to the front straight along. It is frequently said: "He is the company's main influence and strongest force."

Like the first president of the Sloss Company, Joseph F.

James W. McQueen

Vice-President of the Sloss-Sheffield Steel and Iron Company

Johnston, James W. McQueen is descended from old Scotch fighting stock. His father was General John McQueen, one of the most prominent of the Southern statesmen, and his mother was Miss Sarah Pickens, a daughter of Colonel Joseph A. Pickens and granddaughter of General Andrew Pickens of Revolutionary fame, and also closely related to the Calhoun family of South Carolina. General John McQueen served as United States representative from South Carolina from 1847 until 1860, and it was here he gained the sobriquet of "Honest John." When South Carolina seceded, General McQueen was elected to the Confederate Congress and served in that body until the end of the war. It was at this time he came to have such long and intimate association with Secretary Seddon, the father of Thomas Seddon, second president of the Sloss Company, and this circumstance led indirectly to "Tom" Seddon's interest in young James McQueen.

General John McQueen died in 1867, at Society Hill, when his youngest son, James, was barely seventeen months old. As his home was directly in the route of Sherman's raid, his every possession was swept away. His widow removed to her former home in Alabama and brought up her three boys in the face of many hardships.

The McQueen family history has points of significant interest from a general historical viewpoint. Descent from Robert Bruce, king of Scotland, has been directly traced, and General John McQueen was, through his relationship to the McDonalds, the twenty-first in direct line, as the family record indicates. General McQueen's father was Colonel James McQueen, who was born in the Isle of Skye, Scotland, and was of the McQueens of Carryborough and McDonalds of the "Isles." He came to the United States in 1765 with a large colony of Scotch royalists who settled in Robeson County, North Carolina. His wife was Ann McRae, and their home, known as "Queensdale," was one of the most celebrated country seats of North Carolina.[1]

[1] The incident that is perhaps of widest historical import in connection with the McQueen family records is that relating to the illustrious Flora McDonald who saved the life of Charles Edward, the last of the Stuarts and heir to the Scottish crown. Mrs. Sarah Pickens McQueen has given for this record the following sketch of Flora McDonald: "She was one of the bravest women of her day, and espousing the cause of the Chevaliers, she dared what stout, brawny men feared to do. She went to a cave where she learned the Prince was in hiding after the terrible defeat of Culloden, when she knew a large price was set on his head, and there she concocted

a disguise for him. She started home and was met by a party of militia, of whom her stepfather was in command. They arrested her, but later she was released and given a passport for herself, her cousin, Neil McEachin (purporting to be her man-servant), and an Irish woman, Betty Burke. She and Neil McEachin returned to the cave at night, and the Prince was arrayed in a quilted petticoat and coarse printed gown and mantle of dun camelet peculiar to the Irish peasant girl. The night was dark and stormy and they had to wait many hours before they could put off in their boat. After a tempestuous voyage, fatigue, and exposure, they landed at Skye, near the home of Alexander McDonald. The Prince was left in hiding until nightfall and then brought to the house of McDonald where he spent the first peaceful night since his wanderings and exile began, and shortly afterwards embarked on a little vessel for France.

"Flora was arrested on the charge of treason and put in the tower in London, where she remained from December to June. The Prince of Wales, Frederick, fell in love with her while she was in prison, and wanted to marry her. Through his influence she was pardoned, and, as she remarked, 'I went to London to be hanged and came home in a chaise of six.' She afterwards married her cousin Sir Alexander McDonald of the Isles, and she and her husband immigrated to North Carolina about Revolutionary days and settled on Cape Fear at Cross Creek, the site of the present town of Fayetteville, in Cumberland County. When hostilities arose between this and the mother country and all able-bodied men of certain age were required to bear arms, Sir Alexander was anxious to espouse the American cause, but Flora's sympathies were loyal to the Crown, and they took ship and returned to their native land. Flora died in 1790 two years after the death of Charles Edward. She was buried in a shroud made of the sheets between which the Prince had slept in that night at the McDonald home which she had kept fifty years.

"Her half-sister, Flora McDonald, married James McQueen of 'Carryborough,' the grandfather of James W. McQueen of Alabama. It was customary among the early Scotch to name a son or daughter for both grandparents, provided grandparents bore similar names; hence, these half sisters were both called Flora, a name which is still perpetuated in the McQueen family."

CHAPTER XXVII

PRESENT DAY AFFAIRS OF BIRMINGHAM DISTRICT (*continued*). HISTORY OF THE T. C. I. (*continued*). ORGANIZATION OF ALABAMA CONSOLIDATED COAL AND IRON COMPANY

Building of First Steel Mill. Mission of Paschal Shook to steel making centers. Construction of open-hearth furnaces recommended. Formation of Alabama Steel and Shipbuilding Company. General Rufus N. Rhodes elected on board of directors. First cast of steel made Thanksgiving Day, 1899. Bulls and bears again on the rampage over T. C. I. Stock. Resignation of Nat Baxter, Jr. Don H. Bacon of Minnesota elected president. Personnel of new directorate of T. C. I. Record of Mr. Bacon's service in northwest. Summary of his work in Birmingham. His appointment of Edwin Ball as manager of department of ore mines and quarries. Interesting career of Mr. Ball. Mining experiences in Lake Superior country. Description of red ore mines of Tennessee Company. General plan of reconstruction. Mr. Ball places mines on up-to-date level. Introduction of modern machinery. Incorporation of Alabama Consolidated Coal and Iron Company. Men associated in enterprise. Properties taken over. Pioneer builders and past associations. Biographical sketch of T. G. Bush. Affairs of historic old Shelby Iron Company. President Bush's connection with Clifton Iron Company. Calhoun and Talladega County interests. Backward glance over traveled roads. Introduction of Fred M. Jackson. Sketch of Standard Coal Company. Description of Alabama Consolidated holdings. Colonel Bush resigns presidency. Review of first administration. Spectacular career of Joseph H. Hoadley. Formation of International Power Company. A practical iron man assumes management of company. Guy R. Johnson enters Alabama field. Brief review of Mr. Johnson's work in Virginia, Tennessee, Pennsylvania, Ohio, and Illinois. Administration of his Alabama Company.

"IF the Carnegie people and all the rest can make first-class steel out of our iron, — why should n't we?" became the question uppermost in the minds of the officers of the Tennessee Company as orders for their basic iron kept coming in from the great steel companies of the North. Furthermore, the Tennessee Company was beginning to face the fact that instead of continuing to market their raw materials indefinitely they must finish their products. Having now acquired by both building and purchase seventeen blast furnaces, — thirteen in Alabama and four in Tennessee, — all of which were fed by their own coal and iron ore mines, the question of marketing the tremendous amount of pig iron turned out by the furnaces became,

according to Colonel Shook, "as serious as was the marketing of the large amount of fine or slack coal in the early days. While the coke ovens and blast furnaces solved the question of making use of the fine coal, another difficulty of greater proportions was marketing the pig iron. The only solution of this question was to convert the pig iron into steel."

The great success achieved by George B. McCormack and A. E. Barton in the manufacture of Alice basic iron at once, as has been stated, pointed out the way.

President Baxter instructed young Paschal Shook to visit the various steel works in the Pittsburg District, Cleveland, and St. Louis, to which the Tennessee Company was then selling basic iron, and ascertain the practices and methods in vogue and just what precise percentage of the T. C. I. product was used in the furnaces there.

In young Mr. Shook's report, March 2, 1896, he states: "At the Homestead Works of the Carnegie Company, they are using our Alice basic pig in identically the same manner as that of their own manufacture and in about the same proportions. . . . Our iron gives them an acceptable mixture, in that the silicon being exceptionally low, it enables them to use to advantage their off-basic or off-Bessemer irons, containing from one to one and one half per cent silicon. The same remarks apply to all other users of our product."

This report contained further suggestions and recommendations of interest and value to the company and strongly advocated the construction of open-hearth furnaces by the Tennessee Company. In this year pig iron was bringing a very low price, — six dollars per ton at the furnace. The manufacture of steel was recognized to be more than ever essential for the welfare of the entire district. At that very time the Birmingham rolling mills had under construction two small open-hearth furnaces designed to run almost exclusively on scrap. The experiments of the Henderson Company already alluded to had been followed from time to time by many other ventures not one of which proved as technically successful as had the Henderson process, until the Birmingham rolling mills made their first cast of steel, July 24, 1897. "That was a great day," observed B. F. Roden, "a big crowd and a lot of excitement. Men from all over the country gathered together to watch that steel made. I remember how some of the men grabbed up the steel ingots

before they were cold, they were so afraid there'd be some trickery about it."

This experiment was pronounced a technical success. "The suggestion was then made," says Colonel Shook, "that this plant be enlarged so as to give it capacity enough to make it commercially successful. The Tennessee Company willingly adopted this suggestion, and its board of directors passed a resolution subscribing one hundred thousand dollars to aid in this work. The Louisville and Nashville Railroad Company agreed to subscribe for a like amount. After waiting more than a year, nothing had been done, and the question of making steel became an absolute necessity."

The subscription to the stock of the Birmingham rolling mills, payable in coal and iron, had been voted by the board of directors of the Tennessee Company on condition that the company itself stay out of the steel business.

Says Mr. Bowron: "I now realized this was the turning point in the history of the Tennessee Company and of the Birmingham District. I had been very successful in the previous few months in handling financial matters relieving the company from menacing situations and had received kind words from the New York directors. I therefore staked my position upon the issue and wrote a sarcastic letter to the executive committee pointing out that Tennessee Company would never amount to anything unless it went into the manufacture of steel; that there would be neither credit belonging to it nor dividends on its stock unless a new departure was made, and I said that as they were such busy men in New York, if they would turn the officers loose we would get up a steel plant and find the money ourselves." The answer to this letter is copied in full in the minutes of the executive committee of the Tennessee Coal, Iron, and Railroad Company, as follows:

Meeting of December 20, 1897, held at New York.

I. A letter from President Baxter, dated December 17, relative to the Birmingham Rolling Mill Company's steel plant enlargement was read, and, on motion of Mr. Gurnee, seconded by Mr. Swann, it was

Resolved that if the Birmingham Rolling Mill will enlarge its present steel plant so as to make its daily capacity not less than five hundred tons, and will buy the basic iron it may require from the Tennessee Coal, Iron, and Railroad Company at cur-

rent market prices, the Tennessee Coal, Iron, and Railroad Company will agree to take not less than $100,000 of the proposed issue of bonds at the same price they are taken by the Louisville and Nashville Railroad Company, and other large subscribers, to be paid for at the rate of ten per cent per month in pig iron at current market prices; and the Tennessee Coal, Iron, and Railroad Company will further agree not to build directly or indirectly a competitive steel plant in the Birmingham District for —— years provided the work is commenced promptly and pushed vigorously to completion.

(Signed) { JAMES T. WOODWARD, *Chairman.*
H. R. SLOAT, *Secretary.*

Meeting of January 3, 1898, held in New York.

II. [Latter part of minute.] A letter from Vice-president Bowron dated December 24 was read. Mr. Bowron devotes the greater part of this letter in advocating the construction of a steel plant by the company, saying, among other things, "If the executive committee will simply give the officers of the company permission to go ahead and do it, they will not only put up a steel plant for the company within the next year, but will find the money themselves with which to accomplish it."

III. On motion of Mr. Gurnee, duly seconded, it was resolved that the following letter be sent in reply:

January 3, 1898.

JAMES BOWRON, ESQ.,

Vice-president Tennessee Coal, Iron, and Railroad Company, Birmingham, Alabama.

DEAR SIR, — Your letter of the 24th ult. was submitted by me to the executive committee to-day. After discussing the matter, the members of the committee were unanimous in the opinion that the steel plant should be built if the matter can be financed. The committee is perfectly willing to "turn the officers loose," and will treat very hospitably any plan which may hereafter be submitted which will bring about the desired result without drawing upon funds which do not exist.

You must not, however, forget the resolution passed with reference to the Birmingham Rolling Mill, which must be rescinded if you are to build a steel plant in the Birmingham District.

Yours truly,
JAMES T. WOODWARD, *Chairman.*

On motion the meeting adjourned.

(Signed) { JAMES T. WOODWARD, *Chairman.*
H. R. SLOAT, *Secretary.*

Upon receipt of this last letter the officers proceeded to gather subscriptions. President Baxter wrote to M. H. Smith, president of the Louisville and Nashville Railroad, and to Samuel Spencer, president of the Southern, proposing that they assist in raising the capital to construct the steel plant. Both replied in person and discussed the matter in detail. After a conference with O. H. P. Belmont and with John Pierpont Morgan, each railroad company agreed to take $250,000 worth of Tennessee Coal Company bonds; $11,000 worth was the amount Messrs. Baxter, Shook, and Bowron required. W. S. Gurnee, J. T. Woodward, John J. McComb, A. B. Boardman, and Cord Meyer were among the New York capitalists who subscribed. The citizens of Birmingham raised $150,000.

The Alabama Steel and Shipbuilding Company was organized in 1898 for the purpose of erecting the steel plant. It was operated under a special charter granted by the General Assembly of Alabama to James Bowron and George B. McCormack. Its capital stock was $490,000 and it had authority to issue $1,100,000 of bonds given by the stockholders. Its bonds were guaranteed by the Tennessee Company of which it was, as may be seen, a subsidiary company. Its board of directors comprised General Rufus N. Rhodes, George B. McCormack, Walker Percy, J. H. Barr, N. E. Barker, J. K. McDonald, and P. H. Earle, while its officers were N. E. Barker, president; J. K. McDonald, vice-president; and Paschal G. Shook, secretary and treasurer. General Rhodes was elected on the board in recognition of his important services in helping to bring about the achievement of the long-desired project. As editor of the *Birmingham News* he brought every influence in his power to bear upon the construction of the steel plant, and, furthermore, he contributed, personally, several thousand dollars to the enterprise. In the decade preceding, General Rhodes had proved himself a strong advocate for the coal and iron business of Alabama, when, at the inauguration by T. H. Aldrich of the export trade of coal to points in the West Indies and in South America, the general took up actively in his paper the interest of this movement.

Rufus N. Rhodes was born June 5, 1856, on the Mississippi coast near Pascagoula. "My father was a Mississippian," the general once observed, "I am an American. The war settled that." His father, Rufus Randolph Rhodes, son of Andrew Jackson's captain of engineers, was a lawyer and acted as com-

missioner of patents in the Confederate Government. After graduating from the South Western University at Clarksville, Tennessee, young Rhodes took up the study of law, becoming eventually city attorney of Clarksville and member of the General Assembly of the State of Tennessee. After a brief venture in Chicago he removed to Birmingham, Alabama, in 1887 and founded the *Birmingham News,* of which he is still editor-in-chief and proprietor.

Great public interest and enthusiasm for the steel plant was aroused by the press and by the leaders of the enterprise. President Baxter, Colonel Shook, and Mr. Bowron worked indefatigably to raise the funds, day in and day out for three months.

At length, July 11, 1898, when Colonel Shook succeeded in getting several of the largest stockholders in the Tennessee Company to also subscribe, the subscription work was finished. "The board of directors then authorized the officials of the company to proceed at once with the erection of the steel mill," says Colonel Shook, "stipulating that we should build ten open-hearth furnaces with a capacity of one hundred (100) tons each per day, and also put in a blooming mill."

On July 14 a site for the mills was selected at Ensley by President Baxter, Colonel Shook, T. T. Hillman, Mr. McCormack, manager; Erskine Ramsay, chief engineer and assistant general manager, and C. H. Wellman, a steel works engineer from Cleveland, Ohio. The first stake was driven that day and construction work was pushed along. Colonel Shook camped on the ground and superintended the construction of the plant. On Thanksgiving Day, November 30, 1899, the first cast of steel was made and the Birmingham District entered upon a new era. In regard to the new venture Colonel Shook says:

"The Tennessee Company now demonstrated that basic open-hearth steel could be successfully and commercially manufactured in the Birmingham District, and that basic open-hearth rails could be successfully and commercially manufactured and sold in competition with Bessemer rails. This had never before been done successfully in the United States. If Sir Henry Bessemer had never invented the Bessemer process for making steel, the Birmingham District would have been the leading iron center in the world for the last quarter of the century. Unfortunately for the district it had no ores from which Bessemer iron could be made, and when the Bessemer process had been perfected the

Birmingham District realized that all of its ores carried too much phosphorus to make Bessemer iron. The result was that the attention of the iron-making world was directed to the great deposits known as lake ores, including the Vermillion, Gogebic, and Mesaba ranges. These ores were sufficiently low in phosphorus to make Bessemer steel, and as we were just crossing the threshold of the steel age, all other districts that could not furnish Bessemer ores were neglected and discarded.

"A quarter of the century of the reign of Bessemer steel developed the fact that the country required and demanded a better quality of steel than could be made by the Bessemer process. The iron and steel makers of this country were slowly and reluctantly forced to admit this fact. Then, and not until then, did the Birmingham District enter the field as a real competitor. To-day the handicap has been removed and the Birmingham District is not only on a parity with the other iron districts of this country, but possesses an advantage that cannot be overcome, — that is, the close proximity of its coal, iron ore, and limestone. All the materials to make a ton of iron can be assembled at any given point in this district at a less cost than it takes to transport one ton of ore from the lakes to the Pittsburg District. Its transportation facilities for the distribution of its products are as good as that of any other district; its proximity to tide-water gives it advantages for export that no other district has; its geographical location gives it a climate that no other district can have, and the next quarter of a century will give it the development that it is entitled to, and that has been retarded and held back for the last quarter of a century by Bessemer steel."

The following two years were spent not only in producing basic iron and in steel making but in the endeavor to consolidate the various different properties on a basis of uniformity of practice. Very little capital was available for improvements and the bulls and bears were again growling over the Tennessee Company stock. The directors of the company became more than ever concerned in the manipulation of their company's stock on Wall Street, and less interested than ever in the legitimate development of its properties. At a meeting of the executive committee held in New York, November 25, 1901, Mr. Baxter turned in his resignation as president of the Tennessee Company. The following resolutions were unanimously adopted:

"*Resolved* that the resignation of Nathaniel Baxter, Jr., as president and director of this company be accepted; and further

"*Resolved* that the directors of this company desire to express

their appreciation of the long, intelligent, and faithful services rendered by him to the company; and further

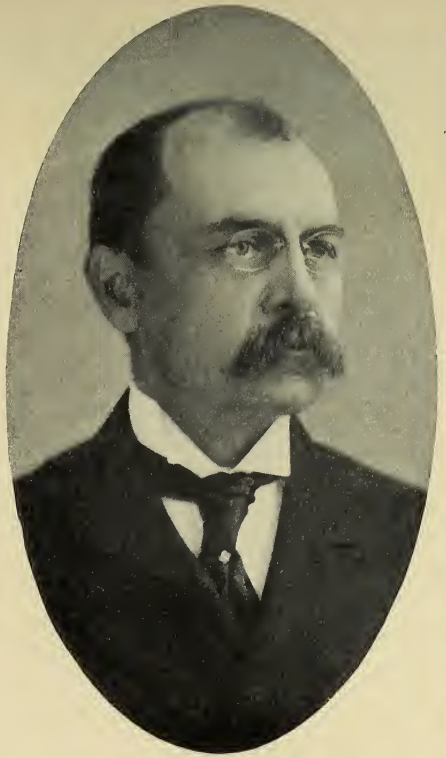
"*Resolved* that the secretary be directed to send a copy of these resolutions to Mr. Baxter.

"L. T. BEECHER, *Secretary.*"

Don H. Bacon, who had been acting as chairman of the executive board since early in 1901, was elected to the presidency and a new régime of officers was appointed eventually to the control of the Tennessee Company. Charles McCrery became vice-president and L. T. Beecher secretary and treasurer. The new directors were James T. Woodward, Frank S. Witherbee, J. Henry Smith, S. L. Schoenmaker, Joseph B. Dickson, Elverton R. Chapman, Cord Meyer, Charles McCrery, Benjamin F. Tracy, Albert B. Boardman, Walker Percy, William Barbour, Don H. Bacon, Henry R. Sloat, and Hugh Dewart.

Don H. Bacon is one of the big mining men of the northwest. When he came down into the Birmingham District in 1901, he carried, all told, a thirty-two years' record of service in the iron business of Michigan and Minnesota. The history of the vast ore ranges, Marquette, Menominee, Gogebic, Vermillion, and Mesabi, are but chapters in the life-work of Don H. Bacon. Mr. Bacon was not by birth a Westerner, but a Pennsylvanian. His folk were farmers and of English stock. They moved out to northern Michigan during the Civil War and settled in old Peter White's little shipping port, Marquette Town, from which, in 1854, the first iron ore of the Lake Superior region was shipped to Pennsylvania from the Jackson mines in Marquette County.

When Don Bacon was sixteen years old he began to earn his living as a messenger boy there in Marquette and picked up telegraphy in between times. In 1869 he entered the service of the Cleveland Iron Mining Company at Ishpeming, Michigan. He remained with this one company eighteen years, occupying successively the positions of operator, clerk, assistant superintendent, and at length agent or general manager. The office of general manager of the Minnesota Iron Company, with direction over four thousand men, was offered him in 1887. His first handiwork was the Soudan Mine of the Vermillion Range, and there is no man of the upper country to-day who has forgotten, or ever will forget, how Don Bacon made Soudan. That Vermillion iron vein, slim as a steel girder and almost as impenetrable, hard



WILLIAM T. UNDERWOOD
Founder of Mary Pratt Furnace Company

DON H. BACON
Former President of Tennessee Coal, Iron and Railroad Company

EDWIN BALL
Manager of Ore Mines of Tennessee Coal, Iron and Railroad Company

riveted to earth, took sharp figuring to get results. Don Bacon got them where no one had before him. He banished the sledge-hammer system, introduced ore crushers, the filling system, modern machinery, and all sorts of original methods and devices to economize cost of production and increase the output. He made Soudan a model mine. He opened dozens of new mines and operated them on a modern scale, securing an immense tonnage for future developments. He enlarged and modernized every operation of the Minnesota Iron Company and increased the yearly output from four hundred thousand tons up into several millions. Under his hand every operation got to be so fair-looking, clean, trim, and efficient that travelers through that North country would sometimes say, "That must be a Minnesota Iron Company mine."

In 1895 the Minnesota Iron Company took on new Mesabi properties, and the first shipment of ore from this range was sent out from a mine under Don Bacon's hand. Men in Duluth and in and around the upper country were almost as crazy about it all as folk were in the boom days of Birmingham.

But all this belongs in the Book of Minnesota, and merely enough may be mentioned to show that Don Bacon had won his spurs before he entered the Alabama field; that he had executive ability out of common and expert knowledge of the mining end of the business. The Minnesota Iron Company, consolidating with the Illinois Steel Company in 1898, made up the huge Federal Steel Company that in 1901 was brought, with the Carnegie Steel Company and the Oliver Mining Company, into consolidation with the United States Steel Corporation. Early in 1901 Mr. Bacon resigned the position of president of the Minnesota Iron Company to become chairman of the board of directors of the Tennessee Coal, Iron, and Railroad Company.

Full and direct charge of all the property of the Tennessee Company was then placed in his hands. He came South. "I found an empty treasury," he stated, "and a property that needed millions for upbuilding. I also found that the operations were greatly hampered, almost directed, in fact, by labor organizations, and the cost of production largely increased as a result. With only the profit from pig iron and coal it was possible to do but a few of the things that the property required."

Mr. Bacon gave a careful and minute survey of the Tennessee Company properties and the conditions under which the com-

pany was struggling, and being furnished with several million dollars for reconstruction, he at once made efforts to improve the mines, the furnaces, the steel plant, and the rolling mills. He ordered the construction of Furnace No. 6 at Ensley. This was built under the general direction of Charles McCrery and effectually demonstrated the low cost at which pig iron could be made in the Birmingham District at that time. The first lot of open-hearth steel rails ever made in quantity were now turned out, and the demand was found to exceed the supply. Mr. Bacon also equipped some of the company's coal mines with modern hoists, electric haulage, coal-cutting machinery, pumps, and fans. The ends toward which his efforts were directed, as he has himself said very simply and briefly, were, "to increase the loyalty and efficiency of the employees; to add to their comfort and decrease the dangers to which they were subject; and to adopt the methods that had stood the test at those mills, furnaces, and mines that were recognized as being the best." To place the red ore mines both on surface and below on a level with the best mines of the Lake Superior country was Mr. Bacon's idea.

He therefore employed as manager of these mines a man of many years' mining experience in the upper country and one with whom he himself had had long association, — Edwin Ball. Mr. Ball was at that time (1901) general manager of all the Minnesota Iron Company mines on both the Vermillion and Mesabi ranges. In addition to the fact that he had so far proved expert as an underground as well as a surface man, Mr. Ball had shown that he could handle men and affairs with a vigorous and progressive hand, that he knew both the practical and technical ends of the business, and had considerable knowledge of surveying and mechanical engineering. He could take the initiative, design, and execute.

In fact, he has spent practically his lifetime in the mining business. Of English birth, his early home was in Devonshire, but his parents brought him to America as a child. His father, Thomas Ball, was a mining man, superintendent of the Mount Hope Mining Company of New Jersey, which is now the Empire Iron Mining Company. Thomas Ball first came to the United States during the Civil War, and after a prospecting tour through the copper country of Michigan, settled with his family at Dover, New Jersey. It was here that his boys started in under his direction.

Edwin Ball's first job, when he was no more than eleven years old, was carrying tools at the old Mount Hope mines in between school terms. He went to work in the mines in his sixteenth year, and two years later struck out for the Lake Superior country. He began working underground at the Republic mine in Michigan, which was considered at that period (1878) one of the best ore mines of the Lake region. During the summer of 1879 he went to Silver Islet, Canada, a mine which was then turning out such an immense amount of pure grade metal that stories of it sounded like a fable. It was a bleak, solitary rock standing out in the great lake about a mile from the Canadian shore, drenched in spray from the waves, and icebound half the year. Not a blade of grass grew there, and the rock was bound in by huge cribs on which the camp was built. The shaft dropped down some nine hundred feet under the lake. After one year's labor at this forlorn and lonely rock Edwin Ball returned to Michigan, " done with silver mining," as he said. After working in the different mines on the Marquette Range several years, he was appointed head mining captain at the Florence mine, Florence, Wisconsin, on the Menominee Range. In 1886 he became superintendent of the Youngstown mine, Crystal Falls, Michigan. He went to Colorado for a short space and made an inspection of the mines of that region. He was always on the lookout for new methods and devices in practical mining everywhere. Upon his return to Michigan he was appointed, in the spring of 1893, superintendent of Platt mine on the Marquette Range. In 1894 he accepted a position with the Minnesota Iron Company as assistant manager of the Minnesota mine on the Vermillion Range at Soudan under Don H. Bacon. In 1895 he became manager, and was later promoted to general manager of all the Minnesota Iron Company mines on both Vermillion and Mesabi ranges. This position he resigned late in 1901, as has been stated, to take charge of the Tennessee Company ore mines. When he came South he brought with him a number of his best men, who were familiar with Minnesota mining methods.

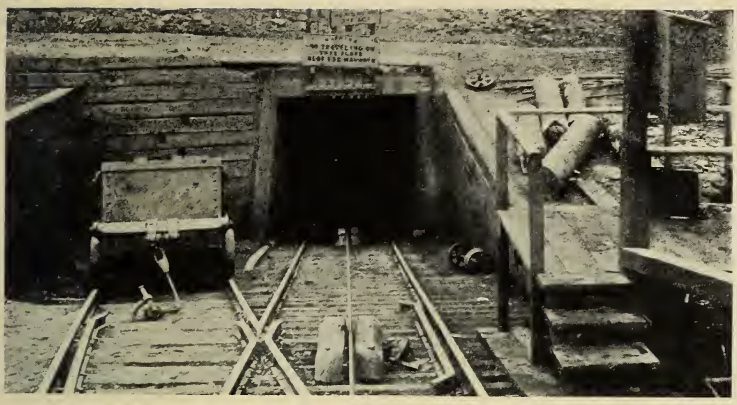
The red ore mines of the Tennessee Company run a good fifteen miles on Red Mountain, counting from Potter to the drifts at Green Springs. The Muscoda group, just beyond Bessemer, is within gunshot of the site of old Fort Jonesboro, the original settlement of Jefferson County. The Ishcooda group has figured in these chronicles before, for here the first mine was worked on

the mountain. During the Civil War, when the mountain thereabouts belonged to Baylis E. Grace, ore from Ishcooda fed the Oxmoor furnaces and was turned into iron for the making of shot and shell and cannon for the Confederacy. The outcrop was again worked in the early eighteen-seventies, when the Oxmoor furnaces were rebuilt by Pratt and DeBardeleben, and a tramway was constructed by Joseph Squire across Shades Valley to the plant. One of the slopes begun at this time was called McElwain slope, after the builder of the old Irondale furnace. In the third group, "Fossil," two slopes, "Ware" and "Alice," were called for Horace Ware, founder of Shelby Iron Company, and for Alice DeBardeleben, daughter of Henry DeBardeleben, for whom the Tennessee Company's Alice furnaces were also named. These various names, like all the old landmarks, are gradually passing into oblivion. With the exception of the names which designate the three separate groups, Muscoda, Fossil, and Ishcooda, the mines are now referred to solely by numbers.

Up to the management of Edwin Ball in the Bacon administration all these ore mines, as has been previously stated, had been worked by contract. Fossil and Spring Gap, driven down over fifteen hundred feet, were the best equipped of any. Upon assuming charge, Mr. Ball changed the entire system and planned out reconstruction work on a large scale below and above ground. The main slopes were leveled; new tipples, new power-houses and boiler plants were constructed, and Nordberg and Allis compressors, Nordberg and Webster-Camp and Lane hoists, automatic stokers and new pumps, twelve-ton skips and crushers were installed. Some additional railroad track to connect with the Birmingham Mineral Division of the Louisville and Nashville Railroad, which serves all the Red Mountain properties, was also laid.

The Tennessee mines are about eight miles, as the crow flies, from the Ensley Steel Mills and six miles southwest of Birmingham. The average thickness of the ore seam is from ten to eighteen feet. The dip of the beds is from twenty to thirty degrees, and the slopes vary from fourteen hundred to twenty-five hundred feet.

All of the improvements introduced by Edwin Ball were designed on solid and enduring lines. The equipment and arrangement of power-houses, engine plants, shops, tipples, etc., at all



1. Main Entrance to Slope, Fossil Mines, T. C. I.
2 Old Entry in Valley View Mine, Red Mountain
3. Looking down Main Slope, Muscoda Mines (Red Ore), T. C. I.

of the mines in the three great groups are practically the same. Built of brick and reinforced concrete, they stand trim and substantial on the face of the hill overlooking the neatly laid out mining camps at the mountain's base. A "dry," model hospital and every kind of up-to-date auxiliary known to the modern mining world have been gradually introduced at these mines. Mr. Ball has remained as manager throughout the successive changes of administration.

The mines at Ishcooda hold a commanding site. Red Mountain, shorn of timber, stands in long, clear-cut, deep red lines, sharp against the sky, and one looks out towards Birmingham. The railroad track, ascending by a series of switch backs, runs along the slope near to the summit, then curves down in and out of the gaps. It is an interesting sight to watch an ore train heavily laden with its rich cargo wind its way slowly down the hillside and go on its journey to the huge furnaces.

The year following the Spanish War an interesting event in the Alabama coal and iron world occurred in New York City. It was the organization of a new company destined to rise to high rank in the Birmingham District, and, indeed, to line up close alongside the giant group composed of the Tennessee Coal, Iron, and Railroad Company, the Pratt Consolidated Coal Company, the Sloss-Sheffield Steel and Iron Company, the Woodward Iron Company, and the Republic Iron and Steel Company.

Thomas Greene Bush and Fred M. Jackson were the two Alabama men instrumental in bringing about the formation of this concern. Abram S. Hewitt of New York, General Samuel Thomas of New York, and Richard H. Edmonds of Maryland, three men intimately acquainted with the mineral resources of Alabama, were among those backing up the scheme. Capital of the International Trust Company of Baltimore, of which they were members, was enlisted. A conference was called in New York, at which Colonel Bush, then president of the Clifton Iron Company and of the historic Shelby Iron Company, and Mr. Jackson, then general manager of the Standard Coal Company, were both present. The Standard, Clifton, Gadsden, and Gate City properties, together with the Mary Pratt Furnace Company, were merged into one new organization and named the Alabama Consolidated Coal and Iron Company.

This giant concern was thus builded on foundations originally

laid by Horace Ware, Stephen S. Glidden, Samuel Noble, Stephen Noble, T. H. Aldrich, A. C. Danner, Joseph Squire, William T. Underwood, John E. Ware, T. T. Hillman, F. M. Jackson, and T. G. Bush.

The big company was organized on July 19, 1899, under the laws of the State of New Jersey, with a capitalization of $5,000,000, of which $2,500,000 were seven per cent cumulative preferred stock and $2,500,000 common stock. Thomas G. Bush was elected president, Fred M. Jackson general manager, and John E. Searles vice-president and treasurer. The original board of directors comprised Abram S. Hewitt, Samuel Thomas, and John E. Searles of New York; J. William Middendorf, Summerfield Baldwin, Douglass H. Gordon, and Richard H. Edmonds of Baltimore; T. G. Bush and F. M. Jackson of Birmingham. Headquarters were established in Birmingham and the operation of the various mines and plants of the company at once began under the new administration.

Although Thomas Greene Bush had not up to this time come into the affairs of the Birmingham District proper, he had been for several years identified with iron interests in other quarters of the State. Since 1890 he had been president of the celebrated old Shelby Iron Company, whose records have been traced from early days in these pages. He was an Alabamian, the son of one of the early settlers from Georgia, and was born at Pickensville, Pickens County, in the year of 1847. His first schooling was in Pickensville and Mobile. He was fourteen years old when the war broke out, but alert, precocious, and "so desirous of being a major-general" that he set about forming two boy companies, and drilled them himself by "Hardee's Tactics," for that was to him then the book of books. He captained both the little companies designated the Lee Cadets and the Butler Guards, and he volunteered the services of the latter to the governor. They were accepted. The Butler Guards even performed some slight assignment on guard duty until 1862, when several of the older members entered the Confederate ranks proper. Being denied the front and the firing-line, their young captain entered the University of Alabama, keeping up his study of tactics the while. Here, though but sixteen years old, he acted as adjutant of the corps of cadets which in 1864 was ordered into service, forming part of the Sixty-second Alabama, of which regiment young Bush subsequently was appointed adjutant. Bush was captured

at Blakely and held a prisoner-of-war at Ship Island and in New Orleans. Here he remained until the surrender of General Taylor, when he was exchanged at Vicksburg, and later paroled at Meridian, Mississippi. His father, who had been engaged in the cotton commission business since 1852 in Mobile, had a large cotton plantation in Mississippi, but, like all the other Southern planters, his affairs were now (in 1865) out of joint.

"Well," he said to both his sons, safe back from the wars, "I have got just enough capital left to set you two boys up in business and let you get a start."

They did not want to go into business, however, and asked for the cash outright so that they could first finish the university course. Their father turned over the funds to them and they entered the University of Mississippi, and were graduated in 1867 with the highest honors of the class.

Then they took up work in Mobile in the mercantile and cotton commission business. In 1871 Thomas G. Bush entered independently into the wholesale grocery business, and began to take part in municipal affairs. His marriage to Miss Alberta Williams took place in 1871. Miss Williams was a descendant of the Hollises of Massachusetts and of Roger Williams. Young Bush had a leading part in the Mobile "revolution" of 1886; he took up the fight to regulate the whiskey license, oust the grafters, and do away with the fee system for county solicitors and probate judges. He was elected to the State Legislature and served as chairman of the ways and means committee on fees and salaries. At this period Captain Bush also engaged in a few railroad enterprises, and became president of the Mobile and Birmingham Railroad Company, which was later merged into the Southern Railroad.

His connection with the mineral section of the State came about in a purely accidental way. He owned a stock farm near Oxford, in the Anniston District. His occasional trips up there from Mobile brought him in contact with that family of ironmasters, the Nobles, so distinguished in these records, and he became a stockholder in the Woodstock Iron Company. In 1890 he joined with other parties in New York in the purchase of the Shelby Iron Company[1] which was then organized with a capital stock of

[1] This historic company, after its destruction by Wilson's raiders, had remained idle for two years. Then, under contract, a controlling interest was transferred to the following New England capitalists: O. D. Case,

$1,000,000. This stock was subscribed for and paid in chiefly by parties in New York and Hartford, among them being W. W. Jacobs of Hartford, Connecticut; Abram S. Hewitt, W. S. Gurnee, Ex Norton, H. E. Garth, General Samuel Thomas, and the Lehman brothers of New York. In Alabama the principal stockholders were A. L. Tyler, Judge James W. Lapsley, Duncan T. Parker and T. G. Bush. They elected Captain Bush president, "And I had no more idea of going into the iron business at that time," said the captain, "than I had of going to heaven." Captain Bush applied to the management of his iron company the same general business principles he had used in his former mercantile and railroad experience. Later he was elected president of the Clifton Iron Company,[1] and for a time he served as

David W. Wetmore, John H. Browning, Newton Case, R. H. Burnham, Caleb Clapp, Samuel Coit, Henry Stanley, Norman Boardman, Daniel Phillips, Edward Livingston, Nathan Benham, A. W. North, and A. G. West. This new company had erected two large and well-equipped charcoal blast furnaces and were producing a car wheel iron that ranked high in quality among the grades of pig metal produced in the South. It had been turning out, in fact, upwards of one hundred tons of metal, or twelve carloads, per day, since 1869. All of this shipped via the Savannah and Memphis commanded market in Philadelphia and New York. The furnaces were each of thirty tons capacity and were the first modern stacks erected after the war, as they were also the first to have connected with them hot blast stoves. They were constructed by Walter Crafts, "then a young man but recently graduated from the School of Science and Manufacture in Germany," said John E. Ware, "and it was he who first applied European principles to furnace construction in Alabama." The attention of Abram S. Hewitt had been called repeatedly to the Shelby grade of iron. The reputation it achieved during the war stood it in good stead, and by the year 1876 the Shelby Iron Company carried on the largest business, without exception, of any iron company in Alabama. Negotiations were entered upon in 1890, looking to its purchase by new parties.

[1] As to the Clifton Iron Company and its properties which were formerly officered by Captain Bush there are notes of interest. John E. Ware states: "In 1862 Samuel Clabaugh and James A. Curry bought timber and ore lands on and near Salt Creek, two miles east of Mumford, in Talladega County, and on the fifteenth of September, 1862, they entered into partnership for the manufacture of charcoal pig iron. They erected a small blast furnace, and operated it under the firm name of Clabaugh and Curry until November 11, 1863, when Clabaugh bought Curry's half interest for one hundred thousand dollars, and ran the furnace on his own account until the plant was destroyed by Federal soldiers in 1864."

In 1868 Horace Ware bought this Salt Creek Iron property in the wrecked condition as left by the Federal troops, and at once set about organizing a company to rebuild it. He got in communication with Stephen S. Glidden of Ohio, and on November 2, 1872, Ware and Glidden filed articles of incorporation with the probate judge of Talladega County organizing the Alabama Iron Company, with themselves as incorporators, and Baird and Orr of Evansville, Indiana, as additional stockholders. They capitalized the company at $100,000 and in 1873 put in blast a thirty-ton charcoal blast furnace. S. S. Glidden was president and James L. Orr secretary and treasurer.

John T. Milner has preserved a detailed statement from Mr. Glidden

president of the Woodstock Iron Company. He took up his residence in Anniston with his family from this time until the formation of the Alabama Consolidated.

Fred M. Jackson, the general manager of the new company, was one of the old guard of the Birmingham District. He worked first at Pratt mines back in 1881, when he had a minor

concerning the workings of this furnace for the years 1873 to 1876. Mr. Glidden states that his labor cost $1.50 per ton; and then he could contract for charcoal at six cents per bushel. Says Milner: "Charcoal iron is made all over the United States where ore timber and limestone can be found; but I doubt whether any furnace outside of Alabama can show such a record as this." This furnace was then the sole one in operation in Talladega County.

Concerning it Dr. Eugene A. Smith says in his report of 1873:

"This furnace, though a small one, yields as well as any in the State. The charcoal is burned in ordinary dust pits upon the grounds, and the ore is roasted at the furnace, so that all the operations, except the raising of the ore and the quarrying of the limestone and cutting of the wood, go on under the eye of the superintendent.

"Of the future of Talladega County in the production of iron there can scarcely be two opinions. The belt of dolomite next to the semi-metamorphic hills holds ore enough for an immense industry and whilst other regions of the county are not so much favored in this respect, yet there are furnaces running in other counties upon ore banks not more extensive than some of those enumerated above.

"Want of transportation stands in the way of the improvement of many of these localities, and the present low prices of iron and bad market are already seriously felt at several of the furnaces already erected in the State."

Under Glidden's management the Alabama Iron Company manufactured or produced pig iron for foundry and car-wheel purposes successfully to December 1, 1881, when Samuel Noble, Alfred L. Tyler, and Horace Ware purchased the property at $150,000. In August 25, 1880, Horace Ware and Samuel Noble organized and incorporated the Clifton Iron Company, with capital stock of $300,000 based on timber and brown ore lands at and near what is known as Ironaton in Talladega County.

Samuel Noble was elected president, S. N. Noble superintendent, and John E. Ware secretary and treasurer. This Clifton property remained unimproved and inactive until December 1, 1881, when it took over by purchase the Alabama Iron Company's property. To this Mr. Noble gave the name Jenifer, in honor of his mother Jenifer Ward Noble. The two properties were then operated under the name of the Clifton Iron Company. In 1884 this company, with Stephen N. Noble as superintendent, erected two fifty-ton charcoal furnaces near the Ironaton ore lands. In 1889 the Clifton Iron Company sold the old Alabama Iron Company property Jenifer, with ten thousand acres of ore and timber lands to John W. Noble, who formed the Jenifer Iron Company. In November 15, 1894, John H. Noble bought this property and organized the Jenifer Furnace Company with himself as president and John E. Ware as secretary and treasurer and general manager.

Although Horace Ware was one of the organizers and a large stockholder in the Clifton Iron Company, he took no active part in its operation, and sold out his interest in 1888. In this year Sam Noble died and John E. Ware sold his stock in Clifton and resigned as secretary and treasurer. A Mr. Prime, of Philadelphia, became president, and John S. Mooring treasurer and secretary, while Stephen N. Noble remained general manager. In 1892 a change of management occurred, when Captain Bush was elected president.

office under Enoch Ensley. After eight years with the Pratt Coal and Iron Company and the Tennessee Company, he quit the coal field for a space and engaged in business in Birmingham. One day early in 1890 T. T. Hillman stopped him on the street. "Fred Jackson," he said, "what right have you got to be in the grocery business when you 're a coal man? Come up to my office right now and arrange to go back into the coal mining business." Mr. Hillman had just acquired an interest in thirty-three thousand acres of Tuskaloosa County coal land, near the Alabama Great Southern Railroad, from T. H. Aldrich and A. C. Danner, original organizers of the Standard Coal Company and owners of all that coal region. One mine had been opened at Brookwood, a few miles of railroad constructed, and Dudley Station started. Says Captain Danner in this connection: "It was our intention to go right across the railroad and build down to the Warrior River, put on barges, and bring such coal as we could sell to Mobile by water; but we were ahead of our time in our desire to develop the coal resources of Alabama, and undertook too much for our capital and for our credit. The banks in this section then had but little money, and individuals had less, and very few appreciated the great future that was ahead of us in the coal-mining business. We got into financial troubles and had to abandon this enterprise."

Mr. Hillman and other local capitalists with Henry L. Einstein, owner of the *New York Press*, and his brother, William Einstein, who furnished the bulk of the purchasing money, now bought the properties and reorganized the Standard Coal Company. The Einstein brothers became president and vice-president. The office of secretary and treasurer and mine manager was offered Mr. Jackson. He accepted the position and moved out to the mining camp at Brookwood. During the nine years he was with the company he developed the properties at Milldale and Brookwood into one of the largest and best equipped in the Birmingham District. The Standard Company erected the first coal washer ever operated in Alabama. This washer was of the jig-type, built by Walter Stein, after a design of Schustamer and Cramer, German engineers. The mines were developed to an output of some eight hundred tons of coal per day. The quality of the coke produced grew famous in Alabama and secured an extensive trade, reaching as far as Mexico.

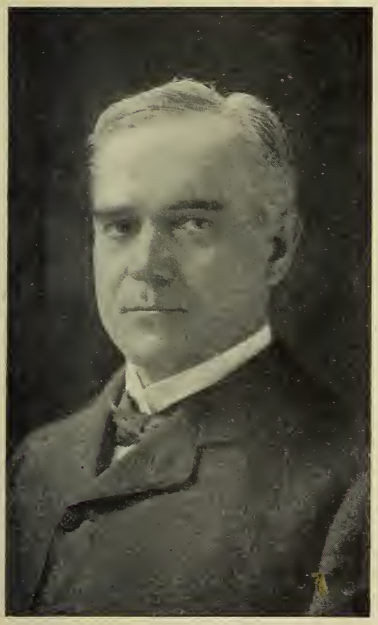
In 1898 W. P. Pinckard secured an option of the Standard

GUY R. JOHNSON

Vice-President and General Manager Alabama Consolidated Coal and Iron Company

COLONEL T. G. BUSH

Late President of Shelby Iron Company and First President of Alabama Consolidated Coal and Iron Company



WILLIAM P. PINCKARD

President of Big Sandy Iron and Steel Company

FRED M. JACKSON

Pioneer Coal Operator and First General Manager of Alabama Consolidated Coal and Iron Company

properties which was allowed to expire. Another option was secured by Mr. Jackson, who immediately engaged with Captain Bush in the organization of a company that would combine the Standard with other valuable properties. The result of their efforts was the organization of the Alabama Consolidated Coal and Iron Company.

Mr. Jackson retired in 1901 to take the presidency of the Blocton-Cahaba Company, in which, together with J. B. Wadsworth, he was owner, and to push the work of opening mines in Bibb County. "Mr. Jackson always seemed to have the faculty of handling men successfully," George B. McCormack said, "and he was noted for his ability to dispose of his output of coal at good prices."

He served as president of the Industrial and Scientific Society at one time, and in 1902 he was elected president of the Birmingham District Coal Operators' Association. He retired from the mining business in 1905 after having served in the field for twenty-four years. An active leader in the cause of prohibition and in all lines looking towards civic improvement, Mr. Jackson is, in 1909, one of the able and public-spirited citizens of Birmingham. He is a stockholder and director in a variety of companies, and is president of the Jefferson County Building and Loan Association. He has served twice as president of the Birmingham Chamber of Commerce.

In 1899 the Alabama Consolidated Company had at its organization the Standard Coal Company, embracing thirty-three thousand acres of coal land; the Clifton Iron Company, with two furnaces with a capacity of two hundred and fifty tons of iron per day, and large brown ore acreage; the Gadsden furnace, ore property, and lime rock quarry; and the Mary Pratt furnace in Birmingham, comprising eighteen hundred acres of red ore, and large tonnage of limestone, dolomite, brownstone, chert, and sandstone. Almost directly after organization, the coal property known as Mary Lee, or Lewisburg mines, containing about two thousand two hundred acres of coal land, and equipped fairly well with machinery, together with about one hundred and thirty coke ovens, was acquired at Captain Bush's instance. Additional coal lands near this property were subsequently bought, making the total acreage about three thousand acres. There was also subsequently purchased

brown ore property at Pryors, Georgia, on the Southern Railway; and what is known as the Attalla ore mines, at Attalla, Alabama. The purchase of these additional properties rounded out the holdings so as to provide the company liberally with raw material from its own mines. Thus, all told, the properties of the Alabama Consolidated gathered together at its start made a fair showing. Just subsequent to its organization the company had issued $500,000 in first mortgage bonds, and $2,500,000 in second mortgage bonds. The proceeds of these bonds were applied to the purchase of property and improvements, except $1,250,000, which was exchanged for a similar amount of preferred stock, thus leaving the outstanding preferred stock of the company, $1,250,000.

Captain Bush resigned from the presidency of the company on January 1, 1907, in order to devote himself more exclusively to his other interests. In addition to serving as president of the Shelby Iron Company, he was a director of the Rivers and Harbors Congress, a member of the Monetary Commission, created by the Indianapolis Monetary Conference in 1897, and was one of the trustees appointed by Theodore Roosevelt of the Foundation for the Promotion of Industrial Peace.

The work of perhaps most signal importance accomplished by Captain Bush in the mineral region of Alabama was the investigation of the gray ore fields of the State. This is a distinctly modern enterprise and one in which he has been one of the most active pioneers. After considerable prospecting and experimenting Captain Bush and his associates purchased a large body of gray ore lands in Talladega County, and in 1905 they organized the Gray Ore Iron Company. Douglass H. Gordon, president of the International Trust Company, and associates, of Baltimore, Maryland, also became interested in this field and organized the Alabama Ore and Iron Company.

In the operation of the plant of the historic Shelby Iron Company Captain Bush made no material changes. The company has been engaged continuously in the manufacture of high-grade charcoal iron, used largely in the manufacture of car wheels. It has two furnaces at its plant at Shelby, Alabama, which are large ones for charcoal furnaces. Only now and then have conditions permitted the operation of both furnaces at one time. Its supply of high-grade ore is still received from the same ore bank from which mining operations began under

Horace Ware in 1848. This supply has, of course, been materially depleted, but the company is continuing its operations as heretofore, when market conditions will admit. It owns a large acreage of land, something over forty-five thousand acres. As has been recorded, this company is one of the most noted in the history of the iron business in Alabama.

During Captain Bush's administration of the Alabama Consolidated Company, it gradually grew in importance as a factor in the iron making of the district. From the beginning it had earned and paid dividends on its preferred stock; it has also earned dividends on the common stock. When the captain retired from the management of the company and turned it over to his successors, the capacity of the furnaces (three finished and one incomplete) was figured at two hundred thousand tons per annum; coal mines, seven hundred and fifty thousand tons per annum; coke ovens, three hundred and twenty-five thousand tons per annum; and ore mines and rock quarry of ample capacity for supplying all the furnaces. The company meanwhile had increased its obligations by issuing $1,250,000 of bonds which were used for retiring an equal amount of preferred stock, while the remainder was set aside for construction and improvement purposes and for acquiring additional properties. The total bonded indebtedness at the close of the business of the company, November 30, 1906, was $2,211,000. Upon the resignation of Captain Bush,[1] Joseph H. Hoadley was elected president and Guy R. Johnson vice-president and general manager.

[1] Colonel Bush died November 11, 1909, in Birmingham. His sudden death came as a great shock to his wide circle of friends in Alabama. The *Age-Herald* wrote editorially as follows: "This sad announcement will cause profound regret throughout Alabama. Colonel Bush was not only one of the best of men but he was a splendid citizen from every point of view. A business man of large capacity and unflagging industry, he was among the foremost upbuilders of the State; and all through his busy life he was ready to assist in every civic or benevolent movement for the public good.

"Colonel Bush was a gentleman in the highest sense of that term. He was cultured and gentle, but always courageous and manly. He loved his fellow men and had long felt the truth of the saying, 'It is more blessed to give than receive.' He was exceptionally well equipped for public life and would have graced any legislative body or administrative office.

"He will be sorely missed in this community in many ways; will be missed as a neighbor, missed as an active and helpful member of the Baptist Church, and missed as a public philanthropist. Colonel Bush's life was indeed an inspiration for young men and the world is all the better for his having lived in it. The people of Birmingham will mourn his untimely end and will long cherish his memory."

Joseph Hoadley is one of the most picturesque characters in the modern industrial world. He has what is called the Western "go," and he typifies precisely what, according to John Bull, is "the remarkable American business man." Mr. Hoadley is a Californian, and was born in 1864 at Marysville. His folk were of New England stock. The Crosby indicator and the Hoadley engine (which last held ground until the big Corliss overtopped it) were inventions of the Hoadley clan. This Hoadley boy took to a machine shop like a duck to water. He had to hustle for himself before he was fifteen years old, and started out in life as an apprentice in a San Francisco shop, one that later became the Union Iron Works. He never could mark time. Before his term was up he jumped aboard the Pacific liner, *City of Tokio,* one day and worked his way over as one of her engineers. He saw China and Japan and got his introduction to steamship machinery and the science of marine engineering. He returned to the 'Frisco shop then and served out his time, adding a stroke or two at draughtsman's work and had a trial at being a locomotive engineer on the Southern Pacific. Then he plunged into the business. He set up as a contractor for mining machinery and landed contracts "all over the State of Arizona." Before he was twenty-one years old he was superintendent of the Calico mines in Southern California. Next he went up to Oakland and took a contract for a door, sash, and blind factory. The undertaking turned out so well from a pecuniary viewpoint that young Hoadley began to enlarge his business, and took contracts which, as he states, "footed millions in the aggregate." Mining machinery became his specialty. He installed during the period from 1886 to 1894 plants in mines located not only in various quarters in California, but in Idaho, Washington, Montana, Oregon, and even in Alaska. He also contracted for power-house plants, for street railroads, electric-lighting plants, and plants for mills, factories, hotels, and huge office buildings.

In 1894 he made Chicago his headquarters and linked his interests and operations in the far West with the chain he now forged in the middle West. Then he went on to New York. "There is scarcely a city in the country," the *Wall Street Daily News* observed, "that does not bear some testimony to the wide extent of Joseph Hoadley's undertakings."

From this time forth whatever Joseph Hoadley touched had "millions in it." He switched off from the contracting business

into the field of the great organizer. His first venture was the purchase of the Wheelock Engine Company of Worcester, Massachusetts, and the Greene engine patents. He combined the best features of both, renamed the plant, calling it the Greene-Wheelock Engine Works, and set it going at better speed and made it earn larger profits than it had before. At the outbreak of the Spanish War the famous Corliss engine works at Providence were shut down under the burden of an eight hundred thousand dollar debt. Mr. Hoadley then bought this property which had done more to revolutionize the industrial conditions of the world than any other factor. Scarce was it on its feet when Joseph Hoadley bought another giant concern that was also suffering under a stroke of financial paralysis. It was no less than the Rhode Island Locomotive Works at Providence that, in the hands of bondholders, had not turned a wheel in three years. That was the big firm that since 1882 had furnished engines to the New York elevated branches of the New York, New Haven, and Hartford Railroad, the Chicago, Milwaukee, and St. Paul Railroad, and the Canadian Pacific.

Thus one enterprise led to another. Just as DeBardeleben had gathered in properties and organized companies all over the Birmingham District in his day, so now did Joseph Hoadley, making a dozen States his checkerboard. Having now the four great engine works of New England under his control, Mr. Hoadley formed a fifth organization, the International Power Company, "as a holding company, to protect the interests that had been obtained." This company, in addition to overlooking the four mentioned, now assumed through its president, Mr. Hoadley, control of the American Ordnance Works of Bridgeport. This concern had shackled itself with an eight hundred thousand dollar debt by prematurely consolidating all the gun works of the United States. Hoadley's statements show how they lifted the entire debt and cleared $237,000 in two years.

Meanwhile, he still reached out, and, supported by the group of his New York associates, he caught up every locomotive works in the United States "worth getting," barring one at Philadelphia. He organized that titanic industrial enterprise called the American Locomotive Company, a concern of national breadth, scope, and importance. The company was capitalized at $50,000,000, $25,000,000 each of common stock and preferred.

Mr. Joseph Hoadley now took a trip across the Atlantic. He

stirred up London, for he got to organizing over there. He formed the American and British Manufacturing Company, and capitalized it at $10,000,000. He threw under its ownership and operation the American ordnance works, controlled by his International Power Company, his Corliss engine works, his Greene-Wheelock combine, and the Amoskeag Fire Engine Company. By this move the International Power Company was now majority stockholder in the American Locomotive Company and all its holdings, and in the American and British Manufacturing Company and all its holdings.

It seemed as if "Thibet would come next," said Mr. Hoadley's friends. But the organizer looked to the States again. One section alone he had failed to traverse — the South. He came, therefore, to Alabama just after the acquisition of the Alabama Consolidated Company by his great International Power Company, and was elected, as has been mentioned, to the office of president. Owing to his many interests in other quarters his trips to the Birmingham District have necessarily been few and far between.

The resident officer in charge of the company is the vice-president and general manager, Guy R. Johnson. At the time he was elected to this office, Mr. Johnson was operating his own furnace plant at Clarksville, Tennessee, and was well informed on the general conditions and circumstances of the iron trade in Alabama. His experience in iron-making covered a wide range of localities, for he had served at various plants in Virginia, Tennessee, Ohio, Pennsylvania, and Illinois. His father before him was a furnaceman, part owner and manager of the Longdale Iron Company at Longdale, Virginia. The Johnson family, which is of Scotch stock, had originally located in Pennsylvania. Oddly enough they took up farming land not far from the old Hillman dairy farm, and just about the same time (1744) the ancestors of T. T. Hillman of Alabama settled there. The ground to-day is one of the most high-priced sections of Philadelphia. Guy Johnson's maternal ancestors, the De La Roche family of France, have, as previously mentioned, romantic connection in Colonial Virginia, and were also early settlers of Baltimore. Mr. Johnson's wife, formerly Miss Edith Ashley Whelen, of Philadelphia, whom he married in 1892, counts in her ancestry one of the Colonial iron makers.

Mr. Johnson's parents located in Allegheny County, Virginia,

shortly after the Civil War, and here Guy Johnson and his brother were born. The Longdale furnace in which his father became interested in 1870, constructed very like Moses Stroup's Old Tannehill, was within rifle range of the Johnson home.

"Almost my first recollection," Mr. Johnson says, "is that old stone charcoal stack. In those days, our furnace being located seven miles from the railroad, we had to haul all our material in wagons. A big day's output was eleven tons. This iron was almost all sold in the vicinity of Philadelphia for car-wheel purposes. In those early days it brought as high as $130 per ton, so that notwithstanding our very crude way of making iron and handling the product, there was a very tidy profit.

"As time went on the charcoal furnace was torn down and a larger one built in its place; but owing to the constantly growing difficulty of obtaining charcoal for the larger furnace it was finally decided to change to a coke furnace. This, in turn, entailed the building of a railroad, connecting the furnace with the main line of the Chesapeake and Ohio. This same road was afterwards extended five miles to reach our ore mines. The demand for Longdale produce kept increasing, so that presently a second stack became necessary, and was built.

"You see I can very readily claim that I was brought up in the furnace yard, because as a boy all my time was spent around the furnaces. The schools in that part of Virginia were few and far between in those days, so that finally my father had recourse to a tutor for myself and brother, and under his training I was educated until the time to go to college."

Mr. Johnson was graduated from Haverford College, Pennsylvania, in 1886. His first "real work," as he terms it, was in the office of the Malaga glass works in New Jersey. Here for one year he did three men's work for fifty dollars per month. "Naturally, however," as he remarked, "having been brought up in the iron business, glass could not hold me very long, so I went back to Longdale." Here he stayed for eight years as engineer and assistant to the manager. His work was to survey all the mines, and keep general oversight over them, make all the drawings for new work, and follow them through the pattern-shop and foundry to erection. In 1895 he was offered the personal managership of the Embreeville Iron Company, in Embreeville, Tennessee.

"This," as he described it, "was a 'busted' town-boom scheme in Washington County, Northeast Tennessee, and was property which, as far as value went, depended entirely upon getting out

cheap ore. Up to this time all my energies had been bent in the direction of becoming a mining engineer rather than an iron man, and it was on account of this bent that I was selected for Embreeville. I stayed at Embreeville for four years, and developed a large and valuable trade for the plant, as after investigation I found that I could make iron suitable for making malleable castings out of the Embreeville ore. This was the first time that such iron in large quantities had been produced South of the Ohio River for this purpose.

"In 1896 our company purchased a second furnace at Johnson City, thirteen miles from Embreeville, and at this furnace we made low phosphorus iron out of the well-known cranberry magnetic ore. This was the first time that cranberry ore had ever been used in a modern furnace, and was the first demonstration of the fact that it could be so used."

Like most of the ambitious iron men Mr. Johnson before long turned to the Pittsburg District. Desirous of getting the broader experience afforded by the big plants there, he took, early in 1899, the position of superintendent of construction and furnace superintendent at the Ohio plant of the National Steel Company. "This," he says, "was the second plant in America to adopt the very high furnaces with large tonnage, the first having been the Duquesne furnace of the Carnegie Steel Company. In sixteen months we built two six-hundred-ton furnaces complete, and started them." After two years' successful service at this Ohio plant Mr. Johnson was transferred by the Carnegie Company to their Duquesne plant, where he remained until 1903, when he went to the Joliet works of the Illinois Steel Company. In a thirteen months' assignment he managed to break the previous records of the works and was then promoted to general superintendent of blast furnaces at South Chicago, where at that time there were ten blast furnaces. He stayed at South Chicago almost three years, during which time it is said that he broke all records repeatedly, and in addition practically rebuilt the plant. He left behind him plans which have since been carried out to a successful termination, and which were adopted with practically no change by his successor. These plans make the South Chicago plant one of the most economically operated furnace plants in the United States. In 1905 Mr. Johnson resigned at South Chicago and bought an interest in the furnace plant at Clarksville, Tennessee, which interest he still retains.

Immediately upon his election to office in the Alabama Con-

solidated Company Mr. Johnson started reconstruction work in every department. Large sums were expended in general improvements and in the installation of new machinery and up-to-date methods of handling raw material. In spite of the dull year of 1908 and the shackled condition of the iron business everywhere, favorable results were obtained by the Alabama Consolidated. Three of the company's four furnaces were kept steadily in blast, and the statements for 1908 show an output of nearly fifty thousand tons more of pig iron than ever was made before by the company. The management has outlined a big scheme of future development. The building of additional plants is contemplated; the opening up of a large territory of coal; and the purchase of additional mineral property, while the improvement work is steadily going on.

CHAPTER XXVIII

THE MAKING OF WALKER COUNTY. PRATT CONSOLIDATED COAL COMPANY, GALLOWAY COAL COMPANY, CORONA COAL COMPANY, EMPIRE COAL COMPANY AND OTHERS

Development of great coal county. Organization in 1904 of Pratt Consolidated Coal Company, largest commercial coal company in Southern States. Strong men of Birmingham District its founders. Review of career of T. T. Hillman, first president of company. Historic association of Hillman family with pioneer coal and iron business of South. Formation of Pratt Coal Company, parent stock of Pratt Consolidated. Introduction of H. E. McCormack. Skill, foresight, and judgment shown in foundation building. Evolution of a coal company. Erskine Ramsay elected vice-president and chief engineer. Activities of Hillman, Ramsay, and the McCormack Brothers. M. H. Smith extends Louisville and Nashville track into Pratt Company properties. Development of new section of Warrior field. Significant event in coal records of State; five coal seams worked simultaneously by Pratt Company. Erskine Ramsay's "pet." Description of Banner mine. Outline of big proportions conceived for Pratt Coal Company. Nunley Ridge Coal Company and Walker County concerns considered for consolidation. G. B. McCormack succeeds to presidency. Growth of the Pratt Consolidated. Formation of Galloway Coal Company. Biographical sketches of Colonel Robert Galloway, Cyrus Garnsey, Jr., John R. Pill. Organization of Yolande Coal Company and Great Elk Company. Backward glance at Walker County operations. Beginning of Corona mines. Work of L. B. Musgrove. County men in the lead. Men outside of county interested. A new captain steps into coal business. Record of Frank Nelson, Jr. Organization of Empire Coal Company.

THE development of Walker County, the greatest coal county of Alabama, is of distinctly present-day interest. Although the earliest coal mining operations of the State are associated with this county, yet the establishment of mines on any other than a crude and primitive scale was practically forbidden until recent years, owing to the lack of transportation facilities.

The country, wild and thickly wooded, is in the very heart of the great Warrior coal field, and furnishes to-day one-fourth of the coal supply from Alabama. It has facilities for water transportation that few counties of the mineral region have.

The Warrior River, formed by the junction of the Sipsey and Mulberry forks, flows through its eastern sections and along the

Erskine Ramsay

First Vice-President and Chief Engineer of Pratt Consolidated Coal Company

southeastern border. From a high ridge in the northwestern corner — a section of a watershed extending into Winston, Fayette, and Tuskaloosa counties — the waters of Big Cane, Blackwater, Loss, and Wolf creeks, and innumerable smaller streams, are sent in a southeastern direction into the Warrior River. The geological reports of Dr. Eugene A. Smith, the recent activity in railroad construction through this section, and the immense amount of capital invested by county men and out-of-the-county men, — all have combined to bring about the concentration of coal development here on a larger scale than in any other one locality of the State. Then, too, it is all a building for the future here as well as for to-day, — a significant point. The place has immense possibilities. Every company in the field is reaching out to big outlines and to larger uses.

Chief among the coal companies concentrating their operations in this county, which are to be treated in some detail in these pages, are the Pratt Consolidated Coal Company, officered by George B. McCormack, Erskine Ramsay, and H. E. McCormack; the Galloway Coal Company, officered by Colonel Robert Galloway of Memphis, Cyrus Garnsey, Jr., and John R. Pill; the Yolande Coal and Coke Company, officered by Grattan B. Crowe; the Corona Coal Company, officered by L. B. Musgrove, and the Empire Coal Company, captained by Frank Nelson, Jr.

The organization of the Pratt Consolidated Coal Company in 1904 was by all odds the most important event in the Alabama coal world of that year. It was formed of a union of six individual companies: Pratt Coal Company, Nunley Ridge Coal Company, Ivy Coal and Iron Company, Gamble Mines Company, Townley Mining Company, and the Tracy City mines, — the combined properties making, all told, a total of about eighty-five thousand acres in both Alabama and Tennessee. Fifty-four mines with an average daily capacity, under favorable conditions, estimated at twelve thousand tons, are operated by the company. It is thus not only the largest miner and seller of coal in the Birmingham District, but ranks as one of the largest commercial coal companies of the Southern States, and is rated high in point of productive capacity in the United States.

The incorporators of this company were G. B. McCormack, T. T. Hillman, Erskine Ramsay, H. E. McCormack, and J. C. Patterson. The present-day officers are G. B. McCormack, president; Erskine Ramsay, first vice-president and chief engineer;

H. E. McCormack, vice-president and general manager; J. A. Shook, secretary and treasurer; E. P. Rosamond and E. B. Pennington, general superintendents.

Of the mines of the company, each of which has a separate and distinct railroad tipple, forty-three are in Alabama and eleven in Tennessee. All of the mines in Alabama are located in the Warrior coal field. They straddle the county lines between Jefferson and Walker counties and run along, mile on mile, into Walker, away down "between the rivers," — that rugged, thick-wooded country known as the Flat Creek and Coal Creek sections, which is bound in by the Little Warrior and the Big Warrior. The earliest records of coal mining in Alabama, traced back to the year 1827, are associated with this particular region about the little Warrior and its tributary streams. The Tennessee holdings of the Pratt Company are also closely linked with the pioneer history of the coal business of Tennessee.

Chief among the founders of the Pratt Company, T. T. Hillman, George B. McCormack, and Erskine Ramsay have figured throughout these chronicles in various chapters heretofore. Associated as these names are with the coal and iron history of Alabama, Tennessee, Kentucky, and Pennsylvania, a rather special degree of interest attaches to the personnel of this first executive board of the Pratt Consolidated Coal Company.

T. T. Hillman, the first president of the Pratt Company, will always be included in the famous group of pioneer iron-masters of the Birmingham District known as "The Old Guard." It will be recalled that in 1879–80, in conjunction with Colonel DeBardeleben, Mr. Hillman built "Alice," the first furnace of the City of Birmingham, and served for years as president and general manager of the Alice Furnace Company. Then, becoming connected with the old Pratt Coal and Iron Company, formed by Enoch Ensley, Mr. Hillman served as vice-president and general manager of the Eusting and Alice divisions, and latterly as a director in the Tennessee Coal, Iron, and Railroad Company, with whose advent in Alabama he was immediately concerned. Shortly after his retirement from the Tennessee Company he organized in 1896, with H. E. McCormack, a coal concern, the Pratt Company, named for that master-workman of early Alabama, Daniel Pratt. Six years later it became the principal factor in the making of the great Pratt Consolidated.[1]

[1] In T. T. Hillman was represented the third generation of the Hillman family that had been associated with coal and iron records of Alabama.

When the old Pratt Coal Company was organized the properties comprised fourteen thousand five hundred and forty-eight acres, covering nearly all of the undeveloped drift Pratt and Nickleplate coal in Jefferson County, and carried in addition three other workable seams of coal. Huge timber tracts and land for town sites and building purposes were also included in this property which had been prospected and bought up gradually and quietly, with good judgment and foresight, by H. E. McCormack, who is one of the most practical coal men in the South, and one of the best known in the coal ranks.

H. E. McCormack was born in Jefferson County, Missouri, October 22, 1861, and after the usual life of a country lad went to the Dakotas in the early eighties, which was the time of the gold excitement there. He went to Tennessee in 1884 and got his first practical knowledge of coal-mining methods there. He became interested in the mining of coal in Walker County, Alabama, in 1892, and from then until now he has been in the coal and coke business for himself or in connection with his close associates. To his ability, foresight, and judgment is largely due the success of the Pratt Consolidated Coal Company.

As a member of the firm of McCormack Brothers and Ramsay he is largely interested as part owner of the Atlantic Coal Company, which, in 1906, bought the holdings of the Gulf Coke and Coal Company, some fifteen thousand acres of coal land lying along the Big Warrior and covering the mouth of Loss Creek, where it is thought will be located the first plant for handling coal by water to Mobile and intermediate points. He is also

His grandfather, Daniel Hillman, built the first forge in Tuskaloosa County in 1829–30 at Tannehill. The site and adjacent ore properties are owned to-day by the Republic Iron and Steel Company. T. T. Hillman's father, Daniel Hillman, Jr., prospected through Jones Valley shortly after the war, as has been related, and purchased the ore properties on Red Mountain known to-day as Songo mines which are operated by the Birmingham Coal and Iron Company. The name of Hillman is also associated with early records of iron making in five States besides Alabama: Pennsylvania, New Jersey, Ohio, Kentucky, and Tennessee, while in Holland members of this family were iron makers for centuries.

T. T. Hillman was interested in various other lines apart from the coal and iron industry. He served as president and director of the old Birmingham Railway and Electric Company and was for twenty-one years a director and stockholder in the First National Bank. He was, in fact, the last of the original board of directors of this bank. His death occurred August 4, 1905, and he was buried in Nashville, Tennessee. The town of Hillman, Alabama, is named for him, as are the Hotel Hillman and Hillman Hospital in the city of Birmingham.

interested in other lands and enterprises of the Birmingham District.

While George B. McCormack was serving as an officer of the Tennessee Company, H. E. McCormack was out in the field for himself, prospecting and gathering in various of the rich coal properties that now make up the Pratt Consolidated Coal Company. He has prospected, they say, over pretty nearly every square foot of the Warrior field. He is a most indefatigable worker, keen, quiet, and alert. He never occupies any position publicly until he has it stockaded and double bastioned beforehand. He was secretary, treasurer, and general manager of the old Pratt Coal Company from its formation until the event of consolidation, when he was elected vice-president and general manager of the new concern.

At the outset H. E. McCormack adopted the policy of marketing his coal almost entirely on annual contract, and this proved the means of keeping his mines in steady and continuous operation. During the first two years their coal was disposed of solely to a few furnace companies of the Birmingham District for coke making. In 1900 the tremendous tracts of coal lands near the Walker line were without railroad facilities. The Pratt Company's one little mine at the start (in 1899) was "Old Nebo," a drift on the Pratt Seam, which was located on the Southern Railway about seventeen miles west of Birmingham. Other drift mines were gradually developed on the Pratt, Nickleplate, and Big Seams. All of the mines were self-draining, and owing to the cheap haulage secured, the steady labor, and the continuous output maintained, the Pratt Coal Company shortly achieved the reputation of giving the cheapest coal of good quality put out in the State. The development work was pushed quietly, economically, and intelligently, always on a scale commensurate with the means of the owners. No "picturesque methods" or grand-stand plays were indulged in. The company simply dug coal and sold all it could mine. Results showed up before long. By the end of 1903 it was operating eighteen mines, and owned a total of eight hundred tenement houses, fourteen churches and schoolhouses, eight stores and warehouses. The stockholders now were T. T. Hillman, Erskine Ramsay, H. E. McCormack, C. A. Nolan, G. B. McCormack, and J. C. Patterson, and the capitalization of the company was increased to $1,000,000. From 1894 to 1904 Mr. H. E. McCormack, with T. T. Hillman, C. A. Nolan,

and J. C. Patterson, had been active in organizing and developing various coal companies. There were eight of these concerns, all told, as follows:

1. Mountain Valley Coal and Coke Company, in Walker County, organized in 1894, and sold to Judge Cook in fall of 1902.
2. Pratt Coal Company organized June, 1896. This company opened New Pratt and Togo mines.
3. Globe Coal Company organized October, 1899. This company originally owned the property where are now located Banner slope and Shaft mines.
4. Pratt Coal Company of Delaware organized July, 1902. This company took over the mines and properties of the Pratt (2) and Globe companies (3).
5. Nunley Ridge Coal Company, Tennessee, organized July, 1903. This property was developed by E. L. Hampton.
6. Ivy Coal and Iron Company organized February, 1904. This property was purchased in February, 1904, by G. B. McCormack and Erskine Ramsay, and was put into the Pratt Consolidated Coal Company by them when it was organized in December, 1904. It owned and operated the Dora mines, Nos. 4–6–8–10, and Davis.
7. Townley Mining Company organized July, 1904. This property was purchased and the Mammoth mine opened in 1904 by G. B. McCormack, H. E. McCormack, J. C. Patterson, E. P. Rosamond, and Erskine Ramsay. It went into the Pratt Consolidated Coal Company when it was organized December, 1904.
8. Gamble mines and property organized October, 1904. This property was operated by the Tennessee Coal, Iron, and Railroad Company on a twenty-year lease, which expired March 2, 1908. The property was purchased from the Gamble heirs (Jasper, Alabama) by G. B. McCormack and Erskine Ramsay October, 1904, and was put into the Pratt Consolidated Coal Company when it was organized, December, 1904.

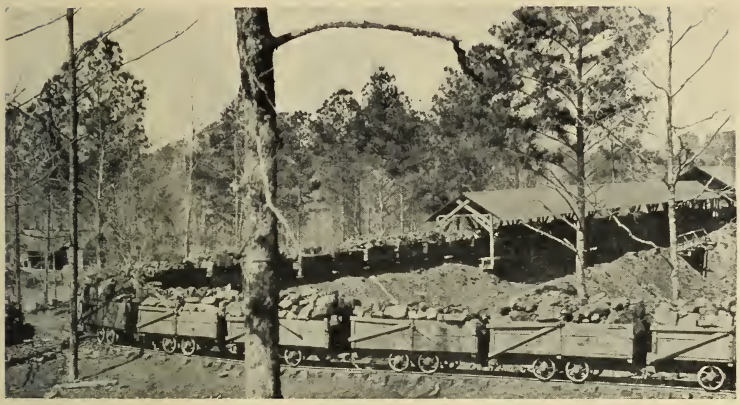
Through the action of M. H. Smith, the Louisville and Nashville Railroad Company started the construction of a branch line, — the Cane Creek branch, — twenty-five miles long, into the undeveloped section of the Warrior coal field. Fifteen miles of the railroad ran direct through the Pratt Company's properties. Additional mines were opened on the Pratt, Nickleplate, and Big seams, and small slopes on the Jefferson and Black Creek seams. Thus the five seams of coal were worked simultaneously in 1903 by the Pratt Coal Company, an achievement up to that year never before attained by any single mining property in the Bir-

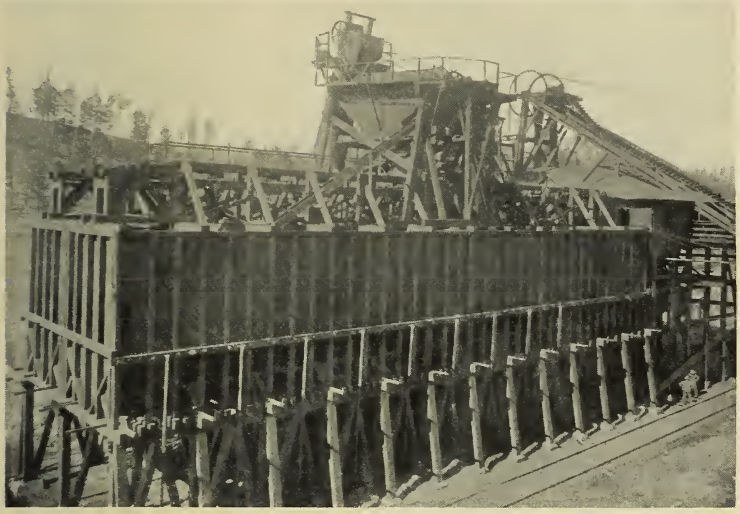
mingham District. No company in Alabama had ever worked more than two seams at the same time. The Louisville and Nashville track was completed to seven of the company's mines by May 1, 1903; the loading of coal began on a great scale, and this part of the country, the famous Warrior field, woke up from its century's sleep. The heart of the coal country of Alabama now beat with new life and energy. Just as the Birmingham Mineral, under M. H. Smith's lead, unlocked the riches of Red Mountain back in the eighties, so now, nearly a generation later, the Louisville and Nashville Railroad disclosed the treasures of the remote and long-settled yet wealthiest region of the great coal field.

By the late summer of 1903 the railroad had reached Banner, the one shaft mine of the Pratt Company, about twenty-five miles from Birmingham, and coal was first hoisted from this point on August 1 of that year. Out of Banner, the company's "prize mine," which had once been a meager drift opened in the Big Seam in October, 1902, there has been made a coal mine strictly up to the highest standard. It is located in Jefferson County, near the Walker line, and, including both shaft and slope output, has a daily capacity estimated at two thousand tons.

This was the first mine in the Birmingham District to install electric haulage, electric coal cutting, and electric lighting. The revolving dumps invented by Erskine Ramsay are installed on the tipple floor. The washery in connection with the tipple has one hundred and twenty tons hourly capacity and is used in preparing the fine coal for power-plant use in stoker furnaces. The entire mine is practically the work of Erskine Ramsay, and is spoken of in the company as his "pet." Mr. Ramsay became associated early in 1902 with the old Pratt Coal Company as vice-president and chief engineer after he resigned from the Tennessee Company. The account of the interesting record of his early life in the coke regions of Pennsylvania, and of his fifteen years' service in the Tennessee Company, has been given in preceding chapters. He is to-day one of the leading engineers of the Birmingham District and is associated with many enterprises apart from the mining business.

Late in 1902, after his resignation from the Woodward Iron Company, George B. McCormack also became an officer in the Pratt Coal Company. Mr. McCormack's career has been fol-





1. Mammoth Mine, Walker County
2. Banner Mine, near Littleton, Jefferson County
3. Flat Creek Mine No. 2, Flat Creek, Walker County

lowed step by step in these pages. Starting out in life as a telegraph operator, taking the first job that offered itself in the old Tennessee Company when it was struggling along up in the Tennessee Mountains, he rose by slow degrees to a position of command and influence in that company, acting as general manager for many years, introducing the making of basic iron on a commercially successful scale, and serving with the company during the period when its richest properties were acquired, when the first steel plant was built, when the first exports of pig iron to foreign countries were made, and when pig iron was made and sold for less than six dollars a ton. Upon a change of administration in the Tennessee Company and the incoming of Don Bacon in 1901 as president, Mr. McCormack resigned and entered the service of the Woodward Iron Company as vice-president, and with this concern he remained until he entered the service of the Pratt Coal Company.

With such practical and experienced mining men back of it, it was little wonder that this company by 1904 became so pronounced a factor in the coal business of the district. The fact that the company carried five workable seams, that transportation facilities were afforded by both Louisville and Nashville and the Southern Railway, that cheap haulage, steady labor, and a continuous output of drift coal could be maintained from twenty to twenty-five years, all combined to give it certain particular advantages. But a form of bigger outlines was being drawn, a reaching out into the future. More railroads were needed, as well as a waterway to the Gulf of Mexico and larger bodies of coal lands. The consolidation of the Pratt Company with various other strong coal concerns was then considered. The properties that came under consideration were the Nunley Ridge and other Hampton properties in Tennessee, and the other concerns already mentioned as operating in Walker County.

The Nunley Ridge Coal Company is situated on the Cumberland Plateau in Grundy and Marion counties in Tennessee. It is practically the last tract of undeveloped coal land on Big Mountain and is said to be the best of the Sewanee Seam left untouched in the Tracy City District. The early history of all this region has been detailed in the chapters which relate to the Tennessee Company. The Nunley Ridge property, together with the individual coal land holdings of E. L. Hampton, comprised over five thousand acres, and at the time of the consolidation of

the company with the Pratt Coal Company, four drift mines were in operation with a daily capacity of eight hundred tons. Mr. Hampton, who had been in the employ of the Nashville and Chattanooga Railway for many years and had been president and principal owner of the Nunley Ridge Coal Company, became interested in the Pratt Consolidated.

The properties of the other companies considered for the Pratt Consolidated were the Ivy Coal and Iron Company, Gamble Mines Company, and Townley Mining Company and are all located in Alabama. All of the operations of the Ivy Company are on the Big Seam in Walker County. Both the Southern and the Frisco railroads pass directly through all of these mines and the Warrior River, now being slack-watered by the Government, runs along its western border for several miles. Facilities for water transportation to Mobile and intermediate points will thus in time be afforded. This property, known as Davis and Victor, was originally owned and developed by W. C. Shackleford, J. V. Allen, and Walter Moore, whose connection with Colonel Ensley has been previously noted.

The Gamble Mines Company and the Townley Mining Company are located on the same tract of land in the neighborhood of Jasper, the county seat of Walker County. The Big Seam outcrops on this property, and it also carries the Jefferson and Black Creek coals. Its first ownership is traceable to descendants of one of "Old Hickory's" soldiers. Another property in Walker County subsequently brought into the consolidation was the Lockhart property, containing twenty-one thousand acres of undeveloped coal lands drained by the Warrior and carrying all the five great seams.

In the month of December, 1904, the consolidation of all these rich properties was effected with the Pratt Coal Company and the greatest commercial coal organization in Alabama history was solidly and soundly established, with five separate railroads reaching direct to their mines — the Louisville and Nashville, the Southern, Central of Georgia, Frisco in Alabama, and the Nashville, Chattanooga, and St. Louis in Tennessee.

Upon the death of T. T. Hillman, the first president of the company, in the summer following the event of the consolidation, George B. McCormack succeeded to the presidency, which he occupies at the present day. He and his associate officers have made of the Pratt Consolidated Coal Company a complete

industrial unit, a tremendous factor in the industrial history of the South. The management includes only local men and they stand for local interests. Their wealth has been put into local undertakings, and their plans directed towards local emprise.

The growth of the Galloway Coal Company, which is now the third largest producer of commercial coal in the South, has been, like that of the Pratt Consolidated, a gradual process. This company went into the coal business twenty-odd years ago with only one mine, — "the original drift of Carbon Hill." Now it has eight mines located in five counties, and the cars of six trunk lines pass by their tipples, the Louisville and Nashville, Southern, Northern, Alabama, Mobile, and Ohio, Frisco, and Central of Georgia railroads. The annual capacity of the mines figures up to very nearly a million tons. All the company's mining is done by electricity and it employs three thousand men. Coal from the Galloway mines is used from the Atlantic seaboard to Texas, while large quantities are yearly exported through the Gulf ports. The general offices of the company are located in Memphis, Tennessee, and its Alabama headquarters are in the Brown-Marx building in Birmingham, as are those of the Pratt Consolidated Company, and the Yolande, Corona, Empire, and the Great Elk companies.

The officers of the Galloway Company are Colonel Robert Galloway of Memphis, president; B. R. Henderson, vice-president; Cyrus Garnsey, Jr., general manager, secretary, and treasurer; and John R. Pill, general superintendent. In 1906 the Choctaw Coal and Mining Company, a Tennessee corporation, was formed to operate all of the mines of the Galloway Coal Company. The officers of this company are as follows: Cyrus Garnsey, Jr., president; John R. Pill, vice-president and general manager; B. R. Henderson, secretary; Robert Galloway, chairman of the board of directors. The superintendents of the Choctaw Coal and Mining Company are men who are for the most part veterans in coal mining in Alabama. They are George A. Davis, superintendent Garnsey Mine, Alabama; George R. Davis, superintendent Savage Creek, Alabama; B. D. Leath, superintendent No. 5 Mine, Carbon Hill, Alabama; James Nicol, superintendent No. 6 Mine, Carbon Hill, Alabama; John Lang, superintendent Chickasaw Mine, Chickasaw, Ala-

bama, and D. J. Parker, who is assistant general superintendent of the Walker County plants.

The founder of the Galloway Company was its president, Colonel Robert Galloway, who, together with his associates in the Patterson Transfer Company of Memphis, Tennessee, purchased the Walker County properties of the Kansas City Coal and Coke Company, which started operations in the eighteen-eighties, and under the management of Colonel R. H. Elliott (formerly connected with the DeBardeleben Coal and Iron Company) opened the first mine at Carbon Hill, but did not enter upon extensive work. It has been under the Galloway administration that the property has reached its present-day development and importance in the Southern mining world.

Robert Galloway was born on November 6, 1843, in London, England, and when very young was brought to the United States by his father. After a few years' schooling at St. Louis, Missouri, and at Keokuk, Iowa, he started into business as a river clerk at Memphis, Tennessee. In the last year of the Civil War he entered the employ of the Memphis and Charleston Railroad as a clerk, and two years later went into partnership with P. M. Patterson in the transfer business, purchasing an interest in the firm and taking over at once the active management of its business.

This was an old-established concern. Its founder, P. M. Patterson, had come to Memphis in the eighteen-forties as agent for a stage line which ran from the western terminus of the railroad, at La Grange, Tennessee, to Memphis. When the railroad reached Memphis (in 1856) Mr. Patterson started an omnibus line of his own. The old firm was to that portion of Tennessee what the Jemison, Powell, and Ficklen Company was to Central Alabama. In 1889 it was incorporated under the name of the Patterson Transfer Company, and it is now the largest warehouse and transfer company in the South, being the exclusive bonded agent of every railroad entering Memphis. Colonel Galloway became actively identified with civic, commercial, and philanthropic interests of his community in the succeeding years. In 1890 he was appointed park commissioner of Memphis, and is to-day chairman of the board of park commission, is a director in the State National Bank, and a member of many of the important clubs of the South, while still retaining the presidency of the Patterson Transfer Company, the Galloway Coal Company,

and acting as chairman of the board of directors of the Choctaw Coal Mining Company.

Cyrus Garnsey, Jr., general manager, secretary, and treasurer of the Galloway Coal Company and president of the Choctaw Coal and Mining Company, is a native of New York State. When he first came to Birmingham he was connected with the K. C. M. and B. R. R. (now the Frisco system) as auditor, but in 1899 he went into the coal business.

John R. Pill, general superintendent of the Galloway Coal Company and vice-president and general manager of the Choctaw Coal and Mining Company, was born in 1866 in the tin-mining district of Cornwall, England, the old home of the Noble family of iron-masters. He is of Scotch-English parentage and for generations his folk have been in the mining business, not only in Cornwall, but in various parts of the world. He was educated in France, England, and Newfoundland. In 1885 he entered the Newfoundland Government engineering service and two years later was sent to Baffin Land in charge of an exploring party, after which he came to the United States and continued in engineering work until his entrance into the Birmingham District as assistant engineer of the Southern Railroad in 1894. In 1901 Mr. Pill entered the service of the Galloway Coal Company. He is a member of the American Institute of Mining Engineers and an associate member of the American Society of Civil Engineers.

Coincident with the formation of the Pratt Consolidated Coal Company was the organization of the Yolande Coal and Coke Company by Grattan B. Crowe. Early in 1904 he acquired possession of many acres of coal lands in the southeastern part of the Warrior Basin, purchasing the property on credit, and starting into the mining business without one dollar's capital. Within two years his mines were turning out several hundred tons of coal per day, and Dr. Crowe began to invest in other mineral lands throughout the counties of Tuskaloosa, Jefferson, Bibb, and Walker, until he had in his individual control many thousand acres of iron ore lands, coking and domestic coal-producing lands, and fire-clay lands. By the year 1907, besides being president of the Yolande Coal and Coke Company, he was president of four other companies which he organized. They were the Abernant Coal Company, the New Connellsville Coal and Coke Company, the Black Crow Coal Company, and the Ashby Brick

Company. The fact that his combined companies mined more than three hundred thousand tons of coal in that year brought Gratton Crowe up to the place of fourth largest commercial coal operator in Alabama.

Dr. Crowe has had an interesting and decidedly melodramatic career. He is a native of Alabama, although in 1870 his father was governor of New Mexico. He was born on August 23, 1865, at Marion, Alabama, and spent his boyhood days in Perry and Bibb counties. He studied medicine, and began his practice in old Brierfield, when the historic plant at that picturesque locality was under the direction of Major Thomas Peter. It was here, in fact, that the young country doctor first became interested in the iron business. After the collapse of the furnaces and the abandonment of the place in 1889, he went abroad and took a course of medicine in Edinburgh, Scotland. Early in the nineties he returned to Alabama, and again became a country doctor and a politician. Affiliating with the populist party, he was nominated for governor of Alabama on the populist ticket; he failed and again went abroad. On this second European tour Dr. Crowe took up the study of geology, and returning to Alabama concentrated all his energies and interests on investigating the endless resources of the Birmingham District. He went out in the field on long prospecting tours, centering his investigations mainly upon the Cahaba field and the Blue Creek section of the Warrior field. Every personal asset he had he threw into his new work. He acquired the Garnsey mines and the Henderson Coal Company, which he eventually sold to the Galloway Coal Company of Memphis; with W. E. Leake he organized the Davis Creek Coal Company, which is now operated by J. C. Maben, Jr.; then, in 1904, as has been mentioned, came the organization of his first individual company, the Yolande, and the others followed in rapid succession.

The properties of the Great Elk Company and the Samoset Coal Company, owned by H. S. Jenkins and F. I. Jenkins of Baltimore, Maryland, are located in Walker County, on the Frisco line. The Samoset lands back up on the Pratt Consolidated lands near Dora, and the Great Elk properties are near Carbon Hill, west of Jasper. The Jenkins brothers became actively interested in the coal business of Alabama about the time of the Spanish War, when as the lessee people of the Mary Lee properties at Lewisburg they entered the ranks of the coal operators of

Walker County. The Great Elk Company was organized by them in 1900, and the first mine, a sixty-foot shaft, was opened at Carbon Hill in that year.

Most of the Walker County mining operations have points of similarity. What is true of one mine is, in general, true of all. The history of a large number of them is traced back to the pioneer work set afoot here mainly by Walter Moore, Enoch Ensley, Henry W. Milner, L. B. Musgrove, and J. C. Musgrove. Among the county men who have been most active in the renaissance of business enterprise here are Judge F. A. Gamble, Colonel B. M. Long, Judge J. B. Shields, Judge J. J. Hayes, W. G. Gravlee, Judge James W. Shepherd, Dr. W. C. Rosamond, L. B. and J. C. Musgrove, John King, T. S. Hendon, David Kirkwood, John Ryan, A. McDonald, Bryan and Gus Whitfield, Robert Palmer, H. P. Gibson, George S. Gaines, C. C. Kelley. Among the out-of-the-county men, in addition to these so far mentioned, have been Joseph F. Johnston, General R. Coulter, General J. W. Burke, W. E. Leake, Culpepper Exum, Gaylord B. Clark, Mark Lyons, Adam Glass, Dr. O. L. Crumpton, James McPhillip, Nathaniel W. Trimble, L. B. McFarland, J. O. Banks, J. S. Billups, James Gallagher, General E. W. Rucker, T. C. Leake, Thomas and E. J. Dunn, J. B. Carrington, R. O. Middleton, T. H. Friel, J. D. Hooper, Belton Gilreath, J. C. Neeley, and Judge Peyton Norvell.

Incidents relating to antebellum days of this county have been given in an earlier chapter. A brief résumé of conditions following the early period which was prepared for this work by Joel C. Du Bose is as follows:

"The disturbances of war during the four years from 1861 to 1865 forced almost complete abandonment of all industries in Walker County, save those connected with farming and with other means of securing the actual necessaries of life. An occasional boat-load of coal was shipped by the Sanderses, the Phillipses, the Burtons, the Bordens, and others. A large cotton mill, factories for woodwork, coke ovens, and sixty-two mines in active operation, and an immense lumber and brick business are among the chief industries developed since the war.

"The changed conditions after the war demanded time for the readjustment of business and the reopening of commercial relations. The report of Professor Michael Tuomey upon the geological structure of portions of the county had directed attention to the vast coal measures, and the maps of the county and the report of its soils and coal and lumber resources by Dr.

Eugene A. Smith, the State geologist, in 1876, had again quickened the thought of the country to the wonderful richness of the coal deposits and other resources. The mineral and timber lands invited large investments of capital. The building of railroads, the erection of planing-mills, sawmills, and a large cotton mill, and the opening of mines and rock quarries, together with the establishment of mercantile business and the higher development of farming interests, called millions of dollars into the county. Men of the county joined with progressive capitalists abroad and gave their energies, money, and thought to the development of industrial business.

"Mine operators anticipated the coming of railroads. The opening of Corona mines was begun on August 14, 1883. The opening of Patton mines was begun about the same time. Tipples were constructed, and coal was piled in waiting for the coming of trains. Right of way was secured for the Georgia Pacific Railway, now the Southern Railway. This road was building from the west, and when it reached Alta, in Fayette County, in 1884, about five miles from the Corona and Patton mines, coal was hauled in wagons to the railroad and shipped to Columbus, Mississippi. Not much was hauled from the Corona mines, but Leake and Dunn Brothers, who opened Patton mines, and who were also railroad contractors, used their teams for hauling a great deal of coal to the railroad. The coal brought $6.50 a ton in Columbus.

"In order to protect their contract rights by entering Walker County according to time agreement, the builders of the railroad rushed an improvised track to Corona. On this track five Mobile and Ohio cars were sent to Corona, and on these cars David Kirkwood, superintendent of the Corona mines, shipped the first coal ever loaded on cars within the limits of Walker County. This was on a Sunday morning in 1884. Five hundred people had gathered from the surrounding country to see the train.

"The president of the Corona Coal Company was General R. Coulter, and the vice-president was Mr. L. B. Musgrove. This was the inauguration of the modern era of coal mining in Walker County. Mr. James Cain, the grandfather of Mr. Musgrove, was partner of Jesse Van Hoose in the ownership of the lands on which was sunk the first coal shaft in the county.

"In 1886 Dr. Eugene A. Smith, the State geologist, and Professor Henry A. McCalley, made a full report of the coal deposits and timber wealth of Walker County. Before this, they had made a report on the river resources from Mulberry Fork to Tuskaloosa. These reports confirmed the estimates of experts sent by capitalists. After the completion of the Georgia Pacific Railroad mines were opened at Patton Junction and in Coal Valley. The Kansas City, Memphis, and Birmingham Railroad was completed in 1889. This is now the Frisco Railroad.

A little after the completion of this road the Birmingham, Sheffield, and Tennessee River Railroad (now the Northern Alabama) was constructed as a feeder to the Kansas City, Memphis, and Birmingham. Spur tracks ran from these main lines to mines along their routes. A short road — the Central of Alabama — now runs northeast from Jasper to Manchester. By the business energy and pluck of Captain Jack Cranford and other progressive, patriotic merchants and developers, this road will be pushed on to Decatur. Coal mines were now opened rapidly throughout the county. Day's Gap, Bruce mines, Pocahontas, Great Elk, West Carbon, No. 5 Carbon Hill, Chickasaw, Calumet, Mountain Valley, America, Annie Mae, Davis, Black Creek, Gas Light No. 1, Tuskaloosa, and Victor mines were opened. Since 1898 forty other mines have been opened. The coal output of the county for 1907 was three million two hundred and forty thousand eight hundred and seventy-one tons.

"Splendid water power and mineral springs are found in the county. Large shipments of hickory timber are made to northern factories for the manufacture of buggy shafts. The rich bottom lands and the red soil of the uplands produce bounteously of corn and cotton and of other staple crops.

"Jasper, the county seat, is a fast-growing town, with large mercantile interests and numerous industrial enterprises. Its new courthouse of gray stone is nearing completion. A Confederate monument in the courthouse square tells of patriotic citizenship. The industries of the town are a grist and flour mill, a tannery, a harness factory, a concrete block plant, an ice plant, a light and power plant, a sawmill and a planing-mill and coke ovens. Jasper is still the center of a big farming and mining and lumber manufacturing section of country. It is well situated at the junction of the Frisco, Southern, Northern Alabama, and Central of Alabama railroads."

Foremost among the new men in the coal business of Walker County is Frank Nelson, Jr., president of the Empire Coal Company, and in 1909 president of the Chamber of Commerce. Although identified with the Birmingham District but a very few years, Mr. Nelson has shown so progressive a spirit and such extraordinary activity that he has reached a position of strength and influence in the community, and is regarded as one of the most successful coal operators of the district.

In 1904 Mr. Nelson, together with the Steiner Brothers (who are bankers in Birmingham), organized the Empire Coal Company, succeeding the Empire Coal and Coke Company[1] in the

[1] The properties of the Empire Coal and Coke Company were originally owned by Henry W. Milner and the Birmingham firm of Rogers, Brown and Company. Mr. Milner, the son of the engineer, John T. Milner, founder

possession of fourteen thousand acres of coal lands situate in the northeastern section of Walker County, near the borders of Jefferson, Blount, and Cullman counties. The property is reached by a branch railroad, nine miles in length, owned by the company, and connected with the Frisco System at Bergens, Alabama.

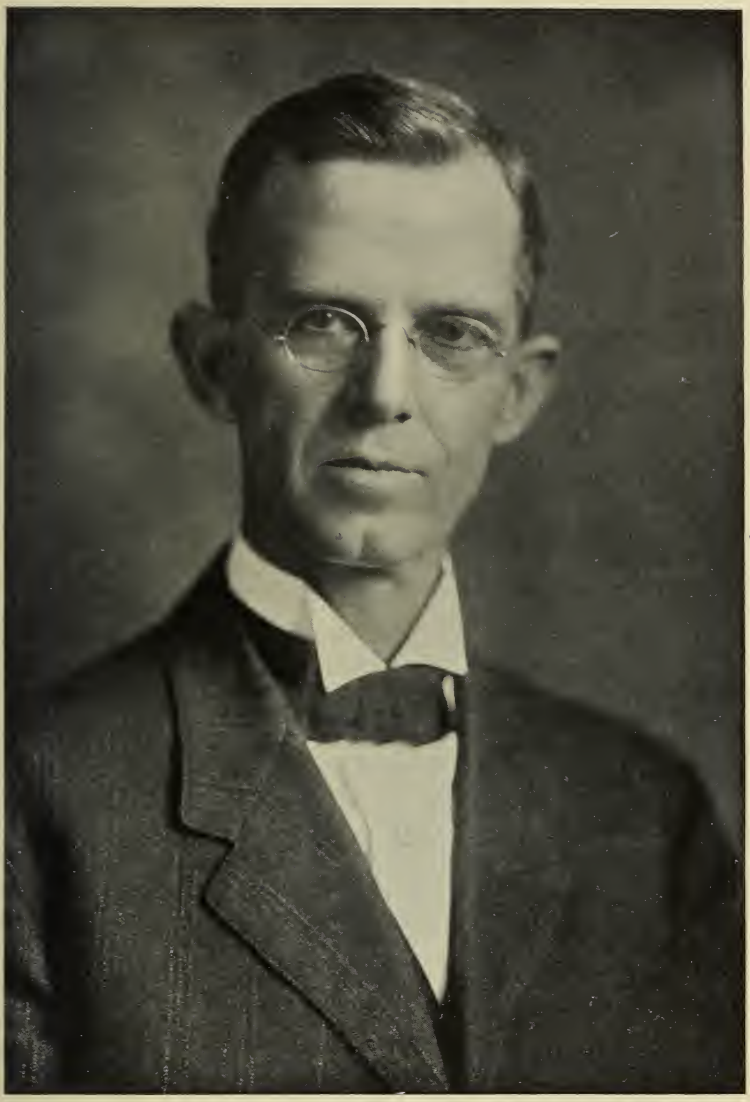
With a capitalization of $640,000 the Empire Coal Company began, on a progressive scale, the development of its holdings which had been dormant for a number of years. It has expended more than $200,000 in the reconstruction of the plant, the installation of modern mining machinery, and the betterment of the property in other important details. The result is that the annual production of coal has been increased from fifty thousand tons to two hundred thousand tons, a larger output, proportionately, than that of any other coal property on the Black Creek Seam.

The lands of the company are underlaid with two seams of coal, — the Black Creek and the Jefferson, — both of which are being worked. Estimates show that in the section of the Black Creek Seam alone, which is within the company's borders, more than thirty million tons of coal remain to be mined.

The Empire Company's equipment includes an endless rope haulage system; two large Ingersoll air compressors; twenty-five undercutting machines; a large fan furnishing an unlimited supply of air in the working rooms; a coal-washing installation, and a revolving screen which classifies the coal in four sizes, — No. 1 Lump, No. 2 Lump, Nut, and Slack. There is also a battery of one hundred coke ovens of the beehive type, which is fed with slack from the Black Creek Seam, and is in continual operation. The reputation of Empire coke as a foundry coke extends to the Pacific coast and into Mexico, where a large proportion of the output is shipped.

The camp of the Empire stands on a plateau, high, healthful, and picturesque, which covers an area of several miles. It is, in fact, a town of no small size, containing two hundred and fifty homes for operatives, on streets lined with shade trees, storehouses, offices, markets, churches, schoolhouses, and other conveniences and privileges, including a complete system of water works.

of Birmingham, was practically brought up to the coal business, and has been continuously identified with coal operations in various quarters of the mineral regions ever since the eighties.



Frank Nelson, Jr.

President of Empire Coal Company

The mining operations of the company are now under the superintendence of J. M. Gray, formerly chief mine inspector of Alabama, who has had years of experience in coal mining. A Georgian by birth, Mr. Gray entered the Birmingham District as a boy in 1886. He worked throughout various counties of the mineral region with the Raglin Coal Company, Henry Ellen, Magella Coal Company, Galloway Coal Company, and the Sloss Iron and Steel Company, until 1901, when he was appointed assistant State mine inspector. In 1903 he became chief inspector, with Mr. Hillhouse and J. M. Russell as assistant inspectors. In January, 1909, Mr. Gray resigned to accept position with Mr. Nelson's company.

Back of the management of the Empire Company from the very day of its reorganization the power of Frank Nelson has made itself felt. In addition to being an exceedingly practical business man, Mr. Nelson has strong executive ability, and he is an indefatigable worker. He is an Alabamian by birth and was born at Columbiana, Shelby County, during the Civil War. After leaving the University of Alabama he took up the charcoal business. His father, H. S. Nelson, was the first man in the State to modernize the system of charcoal burning and it was he who made the first brick ovens ever used in the South. Frank Nelson, Jr., later improved on this system and organized the manufacture of charcoal on a large basis, and contracted to furnish as much as seventy-five thousand bushels charcoal a month to feed both the Bibb and Shelby furnaces. He acquired several thousand acres of timber lands in both counties and established two towns, — Nelson Switch, his shipping point in Shelby, and British, in Bibb. For years he lived in camp in the heart of the woods. In 1896 he sold his big timber tracts to the Shelby Iron Company and went into the banking business in Anniston. From this point in 1901 he took up new ventures in Birmingham. He captained a realty company for one thing, and acquiring possession of large properties in North Birmingham, he organized the North Birmingham Land Company, and set to work, as had Powell and DeBardeleben in the old days, to bring in diversified industries. He was instrumental in the establishment of thirty manufacturing plants in this particular locality, and within four years the population of this suburb of Birmingham increased from 1500 to 7000 souls, and under Mr. Nelson's lead, the place eventually became a part of Greater Birmingham.

Mr. Nelson has applied to the management of his coal company the same general tactics he has employed in his other successful enterprises. There is in him a good deal of the spirit of the old pioneer, — the onward look, — the grit and the enterprise and the ability to "do things." He has ideas of development along progressive and liberal lines, and is a public-spirited man in every sense of the word, as his present administration as president of the Chamber of Commerce shows.

CHAPTER XXIX

THE TRIUMPH OF THE T. C. I.

New syndicate acquires control of Tennessee Company. Necessity for a steel man at head of concern. Brief review of steel mill project. Don H. Bacon resigns as chief executive of T. C. I. Strong financial men of country become new owners. John A. Topping of Ohio elected chairman of executive committee. Review of his policy with Tennessee Company. Sketch of Mr. Topping's career. Glimpse into Ohio field. Appointment of young Frank Hearne Crockard of West Virginia to captain Tennessee Company. Backward glance of Mr. Crockard's work. Complete reorganization of Tennessee Company. Legitimate development work gets its first foothold in affairs of this company. Inauguration of great scheme of iron and steel making. Bird's-eye view of Ensley steel plant. Modern features introduced by Crockard. Panic times hit country. Behind the scenes on Wall Street. Crisis in affairs of Moore and Schley banking firm. Conference of the great financiers. Proposition to sell majority stock of Tennessee Company to United States Steel Corporation put up to John Pierpont Morgan. Theodore Roosevelt's hand in this "panic-relief measure." Tennessee Company is merged into Steel Corporation. Sensation of the Street. How Alabama received the great news. Richard H. Edmond's comprehensive review of situation. Appointment by United States Steel Corporation of a new president of T. C. I., George Gordon Crawford. Biographical sketch of Mr. Crawford. His start in iron and steel business in Pittsburg as chemist in laboratory of Edgar Thomson Steel Works. Practical nature of his theories. Hard work and rapid promotion. His achievements as manager of National Department of National Tube Company. Administration of Tennessee Company affairs. Present-day organization of great company. Résumé of former administrations. Era of great expansion inaugurated. Immense capital invested by Steel Corporation in T. C. I. properties. Provision of adequate water supply made at last. Summary of Gordon Crawford's work. The modern spirit quickens Alabama.

THAT the Tennessee Coal, Iron, and Railroad Company was not being run by the new syndicate that acquired control of the stock in 1901, with any notion as to the legitimate development of its properties was a fact that Don H. Bacon (elected president in 1902) at length found out, as had his predecessors. The company was still being made a Wall Street football. While it fairly shouted for reconstruction work, its directors failed to countenance that reconstruction when set

afoot. During the first four years of the Bacon administration the actual value of the properties was increased by over $5,250,000 but their book value remained practically stationary. Dividends were withheld from the stockholders and the full benefit of the improvements introduced was naturally not realized. The demand was for steel, more steel.

Don Bacon was not a steel man nor had he ever yet tackled the manufacturing end of a concern. He employed experts to inspect the Ensley plant and made such improvements as he could with the means at his command. That the mistakes of construction in the original mill — if chargeable at all in a case where the industry had to be applied to new conditions and raw materials — should be charged largely to the engineering concern that had the building of the plant, is the feeling generally prevalent in Birmingham. None of the men connected with the former régime of the Tennessee Company was familiar with steel plants and steel making.

Great credit is due the former captains of the Tennessee Coal Company, Nat Baxter, Jr., and his associates for inaugurating the steel making operations at Ensley. They had satisfied themselves that the materials in the Birmingham District were suitable, and they believed that the steel industry would eventually be the most important business of this section. They were bold enough to ask for and persistent enough to secure the money to enter upon a most expensive plant installation in a territory where steel making had never been given a really practical trial. They employed one of the most prominent engineering concerns in the United States. The improvements in steel making, the machinery, the devices and inventions of the last ten years were then unknown. The experience gained in working the local raw materials into steel products in the original plant has proved of aid to subsequent managements. Just how much aid is a question that cannot be answered. Nor can it be estimated what might have been done by both managements previous to the abandonment of the old steel plant, had they been supplied with sufficient funds for improvements, or just how many years behind the times Birmingham would have been in 1909, if steel making in this district had not been started when it was. Each management has had its part in the progress of the steel industry of Alabama. Don Bacon brought up the mining end of the company to an exceedingly high standard and, as just

mentioned, made such improvements as he could in the manufacturing end.

Early in 1906, however, the Tennessee Coal Company management again changed. Majority stock in the company was acquired by a new syndicate comprising some of the strong financial men of the country, among them Leonard C. Hanna, Grant B. Schley, Earl W. Ogleby, John W. Gates, James B. Duke and others. At the same time majority interest was also acquired by these men in the Alabama properties of the Republic Iron and Steel Company, and the control of both companies was thereupon assumed by the one management.

"It was realized that the time had now come in the history of the development of the Tennessee properties," said General Rufus N. Rhodes, editor of the *Birmingham News,* "when an expert in the manufacture of steel was a necessity at the head of the company. Mr. Bacon was an expert in mining and an able man of affairs. He was not a steel expert however. Accordingly, he tendered his resignation as president."

John A. Topping, one of the leading iron and steel men of the middle West, was appointed chairman of the executive committee of the Tennessee Company, — a position comprising all the activities of president, — and he succeeded Mr. Bacon in the control of the company in March, 1906. Mr. Topping had also been elected president of the Republic Iron and Steel Company in January of this same year. He now entered the Southern field for the first time. Like Don H. Bacon, he had seen approximately thirty years' service in the business, and had long occupied high administrative and executive offices. His Alabama assignment, as compared to his achievements in northern fields of Ohio, Pennsylvania, and West Virginia, was merely a sally into the field, and directed somewhat at long range. So definitely planned, so well ordered and aggressively executed was it, however that, short as the time was, — comprehending less than a two years' campaign on Tennessee Company ground, — there was built up a thoroughly harmonious and competent organization. More than seven million dollars were expended for new factory extensions and the rehabilitation of the old manufacturing properties, the work of improvement going on without interruption to the mines, mills, or furnaces. In fact, even during this reconstruction period records in production and earnings were secured and dividends were paid.

Although the Tennessee Company was but a unit in the sum of properties under Mr. Topping's eye, he was none the less profoundly interested in its every detail. Conservative, reserved, a man of real culture, good sense, and diplomacy, Mr. Topping is in the personal way, as in the mental, fine and clean cut, essentially the officer and the gentleman. So military in his aspect and methods as to give a decided hint of the West Pointer, he is philosophic as well as practical. He set afoot with ample funds to back his plans, fresh impulses of endeavor, new organization, and new business methods of development and expansion in the Birmingham District. He headed a certain reinforcement, greatly needed at the time, to buttress the Tennessee Company.

John A. Topping is of excellent American stock. For generations his folk, like T. H. Aldrich's, have been prominent in financial, industrial, and professional life. The family is well known in the State of Ohio. James Tallman, one of John Topping's ancestors, was an iron manufacturer in Colonial days and was given a grant of land in Ohio for services during the Revolution. Mr. Topping's father, Henry Topping, a civil engineer, served during the Civil War on General Rosencrans' staff, and in 1866 he settled in Kansas City, Missouri, where he practiced law. It was here that his son, John A. Topping, although born at St. Clairsville, Ohio, June 10, 1860, was reared and educated. Upon his graduation from the public schools of Kansas City at an early age, young Topping returned to Ohio, and in 1876 he started on his business career as a clerk in the First National Bank at Bellaire, a house established by his uncle, A. P. Tallman. The following year, however, he quit banking for the iron business. He went into the old Ætna Iron and Nail Works, a concern also founded by the Tallmans, at Bridgeport, and began at the foot of the ladder and worked twenty-three years with this one company. Through every department of the business he passed to the final rank of president, which office he held at the time of the consolidation, in 1900, of the National Steel Company, the American Sheet Steel Company, the American Tin Plate Company, and the American Steel Hoop Company. These companies were all later merged with others into the United States Steel Corporation.

When the American Sheet Steel Company was formed in the spring of 1900 Mr. Topping was elected first vice-president of the company. In the fall of 1903 he accepted the presidency of

the La Belle Iron Works, one of the largest of the independent companies of the middle West. In the spring of 1904 the American Tin Plate Company and the American Sheet Steel Company were consolidated, and in July, 1904, Mr. Topping was elected president of the new corporation, — the American Sheet and Tin Plate Company. This position he held until 1906, when he became identified with the Republic Iron and Steel Company and the Tennessee Coal, Iron, and Railroad Company.

"The main thing we 're driving for right now in the South," he observed, some months after he started the reconstruction of the Tennessee Coal Company plants, "is to get good men, skilled labor. To do that, of course, we have first to present such advantages as will attract the higher order of workingmen. That means we have got to regard the esthetic and the human side a trifle more. It 's business to be human — apart from a few other reasons. And living conditions at our mines and plants must be improved, and new tenements and schools built. It is a gradual business. We 've planned a good deal ahead, for we 're in for development work on a big scale. And it will take money and time, and, above all, a good man on the ground at the lead. No matter how brilliant a technical or mechanical genius a fellow is, nor how extraordinary his degree of culture and mental ability, if he has n't got just plain, ordinary common sense and a level head he can't make good. The right man must be gotten for the right place."

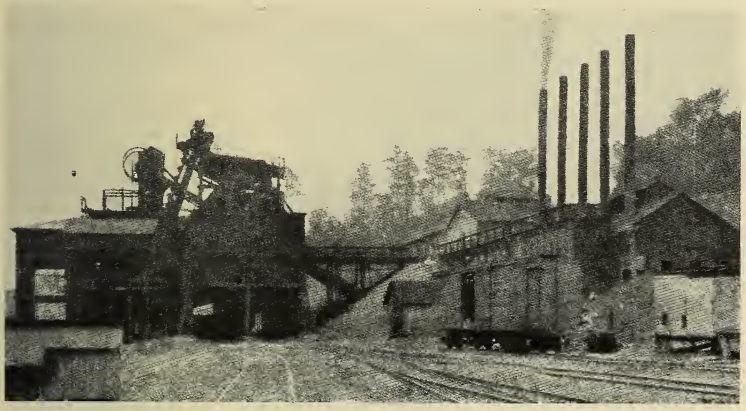
Mr. Topping presented for the consideration of the board of directors the name of Frank Hearne Crockard, as "the right man for the place." And in July, 1906, Mr. Crockard was elected a member of the executive board with title of vice-president and general manager of the Tennessee Company and manager of the Southern District of the Republic Iron and Steel Company. Among his colleagues, besides Mr. Topping, were T. W. Guthrie, assistant to the chairman, W. A. Green, secretary and treasurer, and L. T. Beecher, secretary of the executive committee. This board also controlled the Republic Company, although the properties of the two companies were in no sense merged despite the subsequent popular term, "The Tennessee Republic Company."

Young Crockard found himself on an Herculean venture. He was without a doubt the youngest man ever to step on the Alabama field in so high an official and executive capacity; for he is just a little over thirty. He came to the South with nothing

in mind but the business before him, — to make the greatest steel plant of the world — and he forged ahead with the spirit, "its empire building and we've just begun!" A bent for machinery was born in him, it seems, and his training simply strengthened this tendency. The only son of an iron man, William Crockard, furnace superintendent of Riverside iron works, Frank Hearne Crockard was born October 29, 1873, at Wheeling, West Virginia, the home town of the Woodward brothers, who have been associated with the industrial development of the Birmingham District since the early eighties. He was named for his father's long-time friend and former business associate, Colonel Frank J. Hearne, who, up to the time of his death in 1907, was the great captain of the Colorado Fuel and Iron forces. Reared in and about Riverside, young Crockard early got breath of the iron business. At Linsly Institute he qualified for Lehigh University and completed his engineering studies there and at the Michigan College of Mines. Then returning to Wheeling, he buckled down to the practical end of the iron and steel business, enlisting in the ranks, as it were. He started in as a foreman at two dollars per day at the Benwood furnace of the Riverside Iron Works,—which plant, by the way, later formed an important part of the National Tube Company. He worked as hard as the next man and no more dreamed that in little over ten years he was to become general manager of the greatest coal and iron company of the South and creator of a steel mill destined to revolutionize industrial conditions of the South, than he thought he should become president of the United States. It was in these early days that Crockard came to know the men and know the work, and also came to have that intimacy and fellow feeling for machinery which is one of his most pronounced characteristics. In fact, he has an actual human liking for the huge Allis horizontal cross-compound blowing engine out at the Ensley plant to-day.

After a term of one year's service as foreman, Crockard was assigned to resurrect a dead plant, the Jefferson Iron Works at Steubenville, Ohio. It had been shut down and was in the hands of a receiver. The Riverside Iron Works fathered the essay to raise it. The young college-bred foreman had the old plant on a paying basis in less than six months and by the year's close a neat profit was realized. This occasioned his transfer back to Riverside with promotion to blast furnace superintendent

The New Ensley Blast Furnaces, T. C. I.



Banner Mines, Pratt Consolidated Coal Company

On the Crest of Red Mountain

there. He then became assistant manager of the Riverside Works, the plant being by that time the second largest steel pipe mill in the United States. One of the young manager's associates says: "Frank Crockard's aim all along was simply to try to be the best man on his job and to get good results at the least possible expense to his company. And he succeeded in this by steady, systematic, intelligent work and close attention to details. He reorganized and remodeled his entire department. Every practice and improvement, invention or adaptation that he introduced at Riverside, and every argument that he advanced was backed up in dollars and cents for his company. His record speaks for itself."

It was this record that drew Mr. Topping's attention to the young department manager, and on the strength of this record came his appointment to captain of the Tennessee Company.

To Mr. Crockard was now given general command of both divisions of the two great companies, together with direction of the lines of policy maintaining each; a bigger job than had ever before loomed up on this young man's horizon. The operating division and the commercial division of the Tennessee Company were now reorganized. The operating division included five distinct departments — ore mines and quarries under Edwin Ball; coal mines and coke ovens under Edward H. Coxe; blast furnaces under George L. Collard; rolling mills under William Wuthenow, and the big Ensley division, comprehending steel works, iron and steel foundries, and blast furnaces under C. J. Barr and E. J. Best. The commercial division, including the accounting, order, and credit departments, comprised seven departments — the treasury department, officered by W. A. Green; T. M. Nesbit, and H. Dewart. The sales department, under the direction of F. A. Burr, Willard Wilson, J. W. Whatley; purchasing department, W. A. Major, purchasing agent; merchandise department, B. F. Tyler, manager; traffic department, H. R. Moore, traffic manager, W. H. Johnston, assistant traffic manager; land department, W. B. Allen, manager. Precisely this same organization pertained also to the Republic Company.

As it has been said the manufacturing end of the Tennessee Company — the Ensley division — was its weak point. Where it was ordained to be main prop and feeder of the rest, it consumed, instead, all the company's substance. It was too, the center of the company's activities the pivot upon which its future

operation and fortunes turned. This became, therefore, the first work upon which Mr. Crockard concentrated his forces.

The plant is located on the outskirts of the Warrior coal field, just about seven miles due west from Birmingham. It covers a hundred-acre stretch of high ground overtopping Enoch Ensley's town, and leading off on its western rise into scattered groups of negroes' cabins, blackjacks, piney woods, and mining camps.

The general lay of the land, from northeast to southwest, follows the range of Red Mountain and the valleys. The plant stands practically between two of the Pratt coal mines — slope No. 3 which opens into its extreme northeastern end near the blast furnace brood, and slope No. 4 which runs against the Open Hearth plant at the southwestern limit. Batteries of coke ovens line its western edge. Its raw materials, its flux, and red and brown ore are carried to it direct from the mines by way of the company's railroad, the Birmingham Southern. This line, originally constructed as has been related by Aldrich and DeBardeleben, connects Ensley with the main stems of all the railroads now entering Birmingham. Thus the property, while not equal to Bessemer in point of space or proximity to ores, has yet advantageous points and facilities.

Having taken the survey of the Tennessee Coal Company properties the young steel expert recommended the complete reconstruction of the entire Ensley division. His plan comprised not only the building of a new open hearth steel plant, but also a new rail mill, new skip-filled blast furnaces, ore bins, a boiler plant, lime plant, and new railroad construction as well as additional coal and iron mines. Mr. Crockard then set to work on his figures, submitted costs and estimated profits. It was not, as popular idea has it, that the young man "had but to touch an electric button, and streams of corporation millions would flow to his hand." His own figures must first speak. His conceptions in whole and in detail, original, strong-molded, clear-cut and definite, marked with the introduction of many economies and the promise of big profit, made a satisfactory presentation. The funds were voted and Mr. Crockard was given free rein. Under his leadership work was at once begun on the largest scheme of iron and steel development ever up to that time undertaken in the South.

One feature alone of this great reconstruction scheme — the conception, designing, and building of a steel plant compre-

Frank Hearne Crockard

Vice-President and General Manager of Tennessee Coal, Iron and Railroad Company

hending the duplex process — required in itself more varieties of skill and expert knowledge than all other branches of the iron business combined.

The big work was done in record breaking time. The new plant was constructed with a view to permanence, economy, comfort, and safety along every line. A heavier steel construction than that employed in great bridges and skyscrapers was used. This in itself, while calling for immense capital, is, of course, an economy in the long run, for it ensures against shut down through breakage of machinery, and gives the work its solid and substantial character. Apart from this durable and impressive structure, the light, the wide spaces, and the convenient and logical arrangement of each detail and every machine, giant and dwarf, strikes upon the spirit of the technical man a peculiar sense of gratification. It is, in a word, the accomplishment of a certain ideal of the modern manufacturing standards, and has attracted the attention of the entire steel world at home and abroad. In itself it has established a precedent, and in connection with the associated Bessemer plant it has made a record for tonnage which has not been equalled in this country or abroad at any plant operating a similar number of furnaces. An order that riveted the attention of the entire steel world on the new Ensley plant was that of the late E. H. Harriman for steel rails for all the Harriman roads in 1907 and 1908.

Under the Topping-Crockard administration the Tennessee Company thus kept well in the lead. The idea of the new management was, first and last, as Mr. Topping declared, legitimate development work, "on a big scale." An agreement looking towards this end had been privately made between the business men comprising the syndicate that held a majority of the stock, this agreement being not to sell even one share of that stock for a period of two years. Sixteen men comprised the syndicate as follows: O. H. Payne, L. C. Hanna, G. B. Schley, J. P. Duke, E. J. Berwynd, J. W. Gates, A. N. Brady, G. A. Gessler, Oakleigh Thorne (who held ten thousand three hundred shares each); E. W. Ogleby, H. S. Black, F. D. Stout, J. W. Simpson (who held five thousand one hundred and fifty shares each); G. W. French (two thousand five hundred shares); S. G. Cooper (one thousand five hundred shares), and John A. Topping (one thousand shares). When they purchased their shares in the fall of 1905, there was outstanding common stock valued

at twenty-two million five hundred and fifty-three thousand dollars ($22,553,000) and preferred stock to the amount of two hundred and forty-eight thousand three hundred dollars ($248,300). Thus the syndicate held one hundred and eighteen thousand five hundred shares, which was more than half the total. One half of the stock was paid for by the individuals and withdrawn, and one half was borrowed upon by the holders. As has been stated, about seven million dollars was then expended during the ensuing two years of the Topping-Crockard administration, in improvements, and early in 1907 new stock was issued. The banking firm of Moore and Schley, acting as agent for the syndicate, borrowed a large share of this money for themselves and the men comprising the syndicate. By the late fall of 1907 the firm had outstanding between five and six million dollars, which, added to their other outstanding loans made a total of thirty-three million dollars. Within forty-eight hours more than six million dollars was called for. As a matter of course, the huge demands could not be met on the instant. All told, one hundred thousand shares of Tennessee Coal, Iron, and Railroad Company stock in loans had been placed by the firm with other banks. When the panic struck the country in full force, this stock was neither bought nor sold owing to the fact that so much of it was out of the market. As conditions grew worse the banks refused to loan upon a security where the market was to all appearances perfectly normal. Nearly all these banks called on Moore and Schley to take the Tennessee out of their loan. The firm asked the members of the Tennessee Company syndicate for assistance, but it was not forthcoming. The credit of the firm was tottering. Grant B. Schley then called on the New York attorney, Lewis Cass Ledyard, who is a friend of John Pierpont Morgan, and the matter of the merger of the Tennessee Company and the United Steel Corporation was discussed as the sole means of saving the Moore and Schley people from shipwreck. It was decided to submit the proposition to Mr. Morgan with the suggestion that the steel corporation buy the Tennessee stock on the basis of par and cash. One conference followed another and excitement grew intense.

On the night of November 2, matters came to a head. Mr. Morgan invited the men concerned to a special conference at his library. The greatest secrecy was maintained and no one

excepting the financiers interested was present. These men, besides Mr. Morgan, were Thomas F. Ryan, Richard Trimble, secretary of the steel corporation, Grant B. Schley of the firm of Moore and Schley, George W. Perkins and Charles Steel of Morgan and Company, George F. Baker of the First National Bank, Henry C. Frick, the steel magnate, former Judge E. H. Gary, chairman of the board of the United States Steel Corporation, Lewis Cass Ledyard, William Solomon, and Isaac N. Seligman.

The session lasted until sometime after midnight. The Tennessee Company's affairs and those of the Moore and Schley firm were discussed in detail. Mr. Morgan did not consider that any particular benefit would come to the Steel Corporation by acquiring so much as a dollar's worth of T. C. I. Company's stock. The main concern of the majority of the financiers present was to keep the Moore and Schley firm, in which they were all more or less interested, from going under. The fall of Moore and Schley would have also meant the collapse of dozens of other concerns, and general demoralization on Wall Street. One point raised was the uncertainty of the Government's attitude towards the Tennessee Company's merger, in case the merger should be decided upon, whereat it was at once proposed that Judge Gary and Mr. Frick go down to Washington on the next train and talk over the situation with President Roosevelt. If this point were cleared, Mr. Morgan would regard the merger with favor.

President Roosevelt's statements referring to this matter have been widely published, although very few of the details of the great trade are known. Mr. Roosevelt wrote to Honorable Charles T. Bonaparte, attorney general, the following letter in regard to the situation:

THE WHITE HOUSE, WASHINGTON, November 4, 1907.

MY DEAR ATTORNEY GENERAL, — Judge E. H. Gary and Mr. H. C. Frick, on behalf of the steel corporation, have just called upon me. They state that there is a certain business firm (the name of which I have not been told, but which is of real importance in New York business circles) which will undoubtedly fail this week if help is not given. Among its assets are a majority of the securities of the Tennessee Coal, Iron, and Railroad Company. Applications have been urgently made to the Steel corporation to purchase this stock, as the only means of avoiding a failure.

Judge Gary and Mr. Frick informed me that as a mere business transaction they do not care to purchase the stock; that

under ordinary circumstances they would not consider purchasing the stock, because but little benefit will come to the steel corporation from the purchase; that they are aware that the purchase will be used as a handle for attack upon them, on the ground that they are striving to secure a monopoly of the business and prevent competition — not that this would represent what could honestly be said, but what might recklessly and untruthfully be said.

They inform me that, as a matter of fact, the policy of the company has been to decline to acquire more than sixty per cent of the steel properties, and that this purpose has been persevered in for several years past, with the object of preventing these accusations, and, as a matter of fact, their proportion of steel properties has slightly decreased, so that it is below this sixty per cent, and the acquisition of the property in question will not raise it above sixty per cent.

But they feel that it is immensely to their interests, as to the interest of every responsible business man, to try to prevent a panic and general industrial smash-up at this time, and that they are willing to go into this transaction, which they would not otherwise go into, because it seems the opinion of those best fitted to express judgment in New York, that it will be an important factor in preventing a break that might be ruinous, and that this has been urged upon them by the combination of the most responsible bankers in New York, who are now thus engaged in endeavoring to save the situation. But they asserted they did not wish to do this if I stated that it ought not to be done. I answered that while, of course, I could not advise them to take the action proposed, I felt it no public duty of mine to interpose any objection.

Sincerely yours,

THEODORE ROOSEVELT.

Honorable CHARLES J. BONAPARTE, *Attorney General.*

With the coast now clear, to all appearances, the matter proceeded with almost incredible swiftness. Judge Gary and Mr. Frick returned to New York late on the night of November 4. Again besieged by an army of reporters, Judge Gary refused to discuss his mission beyond saying: "The President is disposed to do everything in his power that is right and proper to benefit the interests of the country."

Early the following morning, the officers of the United States Steel Corporation, the bankers and trust company presidents again met for an all day conference at the residence of John Pierpont Morgan, and the trade was made. That very evening Judge Gary gave out for publication the following statement in regard to the steel transaction:

"The United States Steel corporation has been negotiating for a majority of the stock of the Tennessee Coal, Iron, and Railroad Company at par. The company will also offer the same terms to the remainder of the stockholders who make tender of stock in fifteen days. The finance committee of the United States Steel corporation has closed a contract, subject to the formal approval of the board of directors, who meet to-morrow at four o'clock in the afternoon. Acquisition of this property will increase our percentage of the total steel produced in this country about two and a half per cent, making our percentage of the total steel produced in this country about sixty per cent."

The steel corporation paid for the Tennessee Company property chiefly with five per cent bonds of its own issue. The actual figures were $34,684,977.64, par value of bonds, and $632,655 cash, making the total purchase price $35,317,632.64. In return the steel corporation received about all of the Tennessee Company's stock, having a par value of $30,374,825. The exchange was at the rate of $119 of steel bonds for every $100 share of Tennessee stock.

As a matter of fact, the Tennessee property ranks first in the United States in point of area controlled, and second in point of quantity of undeveloped coal and iron ore. The estimate in the fall of 1907 was that, "the Tennessee Company owned from 500,000,000 to 700,000,000 tons of iron ore, 1,500,000,000 tons of coal, a large amount of fluxing material, and large quantities of all the other elements needed for the manufacture of steel."

As may be surmised the news of the great deal burst like a sudden sunbreak upon Alabama, struggling, as it was, to hold its own in the face of the gathering clouds. A whole world of enterprises apart from coal and iron interests was influenced by the stupendous merger. The *Birmingham Age-Herald,* November 6, discussed the situation as follows:

"The sale of the Tennessee Coal, Iron, and Railroad Company to the United States Steel corporation continued to be the chief topic in local industrial and financial circles yesterday. The deal is regarded here with high favor, since the general policy of the steel corporation is known to mean development on large lines, and since, too, it is known to be the only industrial institution strong enough to put up cost and push improvements in spite of adverse financial conditions.

"It is thought that but for the money panic in New York the interests which acquired the Tennessee properties two years ago would have retained their holdings indefinitely. The men who

formed the syndicate felt satisfied that they had a good thing, and it was seen that their purpose was to develop the properties in a steady and business-like way. But the money squeeze came, and under the circumstances it was found best for all concerned to let the great steel corporation take over the properties.

"The steel corporation is made up of a large number of subsidiary companies, operating innumerable large plants. Among the chief subsidiary concerns are the Carnegie Company, the Federal Steel Company, under which the Illinois Steel is operated, the American Steel and Wire, the National Tube, the American Steel Hoop, the American Sheet Steel, and the American Bridge Company.

"The Tennessee Company, with its enlarged open-hearth rail mill and six blast furnaces at Ensley, and ten stacks outside of Ensley, and with its immense coal and ore properties, will come to be one of its most important subsidiary companies. Like the other subsidiary concerns it will retain a complete executive and operating organization.

"The steel corporation being a large exporter it will have a great advantage in shipping its products from the Birmingham District because of the cheap ocean rates at Pensacola and Mobile as compared with rates from eastern ports. In pointing out this advantage men prominent in the metal trade here say that the United States steel will naturally push development in the district, and will, as soon as possible, start new construction, — steel plants and plants for turning out various finished products. The immense trade the steel corporation will have with Panama will be an additional reason, it is said, why the steel corporation must hurry along development. Taken all together, the new owners of the Tennessee Company will, it is thought, make the Birmingham District hum as it never hummed before. They have enormous capital and will expend many millions here every year."

The *Birmingham News* said editorially:

"The taking over of the stock or properties of the Tennessee Coal, Iron, and Railroad Company by the United States Steel Corporation is a subject discussed this morning in industrial and financial circles to the exclusion of every other. Local industrial captains very confidently assert that the change of ownership will prove of vast advantage to the Birmingham District.

"One gentleman, an authority in manufacturing and banking circles, this morning said that in his judgment 'twenty-five per cent was added to the value of all property in the Birmingham District by the simple announcement that the United States Steel Corporation had become the owner of the properties of the Tennessee Coal, Iron, and Railroad Company.' Others were just as confident that it was 'a real good thing.'

"About ten days ago, when the money flurry in New York

was at its height, one of the New York dailies contained a statement that the United States Steel Corporation had offered to lend the associated banks of New York, in one lump, $50,000,000 in cash. The purchase yesterday, or the day before, of the Tennessee Coal, Iron, and Railroad Company by it would indicate that it has a large amount of money ready for use, the sum involved in the purchase of the Tennessee Coal, Iron, and Railroad Company being reported as about seventeen millions of dollars in cash. It would appear, therefore, that the United States Steel Corporation has plenty of money, and money mixed with experience is all that the Birmingham District needs for fullest development. A prominent man of affairs this morning said that in his judgment the advent of the steel corporation into the Birmingham District made a city in this valley of 300,000 people in two years very probable.

"It is a well-known fact that the steel made at Ensley is in many respects the best in the world. The United States Steel Corporation practically controls the steel trade of the United States. With enlarged and improved plants it can make steel in this district cheaper than anywhere else. Superiority of product and cheapness of manufacture will conspire soon to make the Birmingham District the largest steel manufacturing center in the universe."

Richard H. Edmonds, editor of the *Manufacturers' Record,* in discussing the significant purchase wrote as follows:

"About ten years ago the late Abram S. Hewitt, universally recognized as one of the world's greatest metallurgists, gave me for publication an interview, in which he said that Alabama would 'within twenty-five years from that time dominate the basic steel industry of the world, just as Pittsburg and the lake region dominated the Bessemer steel industry.' All experts familiar with the vast supplies of ore in Alabama and their proximity to coal have recognized that this situation, as clearly seen by Mr. Hewitt, is one of the greatest assets of America, and that in the general rounding out of American development there would come a time when these resources could be utilized on such a large scale as to bring about a fulfillment of Mr. Hewitt's prophecy.

"I take it that the long-headed people who have managed the steel corporation have recognized this strategic importance of the Alabama field just as fully as Mr. Hewitt, Mr. Carnegie, and others have done in the past; for, like Mr. Hewitt, Mr. Carnegie once wrote me to the effect that he looked to Alabama as the chief competitor in the iron trade with Pennsylvania. But the conditions of their own operations necessarily caused the managers of the United States Steel Corporation to concentrate all of their energies upon the rounding out and completion of the

vast plans for the fullest development of their Pennsylvania and Lake Superior interests. The carrying out of these plans has been on a scale of such magnitude as to fully tax the activities of the men who have been leaders of the vast steel interests of that corporation. Moreover, the people who three years ago secured control of the Tennessee Coal, Iron, and Railroad Company had a full realization of the great extent and future value of these properties, and it is quite certain that but for the present financial situation they would not have parted with the control of that property for even three or four times what present necessities have compelled them to accept. However much it is regretted that the men who owned the Tennessee, and who knew its almost immeasurable possibilities, have been compelled to part with it, the steel corporation is the chief beneficiary of the deal.

"When the steel corporation was organized it claimed ownership of about 700,000,000 tons of iron ore. This has since been increased by securing the Hill properties, but it has been fully demonstrated that the Tennessee owns not less than 700,000,000 tons of ore, or as much as the steel corporation owned when it was first organized, and at least 200,000,000 tons more than the highest estimate put upon the amount owned by the Hill interests. In addition to this the Tennessee Company owns far more coal than the steel corporation has even owned before, estimated at 2,000,000,000 tons. If the Tennessee Company did not have a single furnace or a single mine, its properties would be worth far more than the cost to the steel corporation. The fact is, while the steel corporation has estimated its iron ores in the ground as worth $1 a ton, it would have to put an estimate of only 5 cents a ton on the ore in the ground in Alabama and count its cost at only 5 cents a ton to make a total valuation of $135,000,000, or more than four times the cost of the property to the corporation. The increasing scarcity of iron ores throughout the world makes a valuation of $1 a ton really a very low price to put on ores in the ground.

"Some months ago I received a letter from J. Stephens Jeans, secretary of the British Iron Trade Association, one of the world's greatest iron authorities, in which, referring to the increasing scarcity of ores compared with the world's increasing demand, he said that iron ores were becoming of such priceless value it was quite possible that in the near future no country would permit their exportation, and that if the steel corporation was now being formed, it would be justified in putting a much higher capitalization than $700,000,000 on its 700,000,000 tons of ore. In other words, that they would be justified in really estimating the value of their ores in the ground more nearly at $2 a ton than at $1. It has been estimated that the supply of valuable ore in the Lake Superior District is about 1,500,000,000 tons, owned by the steel corporation and independent companies,

although some experts have put the estimate as high as 1,750,000,000 tons. As the Lake Superior District is now mining over 40,000,000 tons a year, the total known quantity in all that region, even at the present rate of production, would last only fifty years, even if it should prove that there are 2,000,000,000 tons yet unmined. But as iron production doubles every ten years, the Lake Superior District will be drawn upon for not less than 2,000,000,000 tons within the next thirty or forty years. This would entirely exhaust the total known supply of all that region to-day. It is, therefore, a matter of profound importance to the steel corporation, and really to the future of the whole steel industry, that it has been able to secure such a great ore property in Alabama. With the 700,000,000 tons of ore to which in the course of events it has now fallen heir through its purchase of the Tennessee Company, its own future is made safer and sounder than ever before.

"So important is the Alabama region and so strategic is the situation that it is practically certain that economic development and the safety of its operations for the future would have compelled the steel corporation to enter the Alabama District even if it had to do so at a cost of four to five times as great as it has now paid for the Tennessee Company. I believe that no one familiar with the whole history of the iron and steel industry of the United States can question the fact that the purchase of the Alabama properties is vastly more important to the steel corporation than was the purchase of the Hill ore lands, and that the price at which the former were secured is so triflingly small as compared with inherent values that this is the most important deal made by the corporation since it was first organized. It seems a great pity, and yet it is one of those conditions that cannot be helped, that the owners of the Tennessee Company, just when they had commenced to reap the fruition of their outlay for improvements, have had to yield up this rich prize.

"The whole metallurgical world is now turning to basic steel. The Tennessee Company has been making for the last two years what is accepted by railroads as the best steel rails in the United States, and some months ago E. H. Harriman placed an order for 150,000 tons of rails for the Union Pacific and the Southern Pacific in preference to the steel corporation by reason of his desire to secure basic rails. In order to meet the demand for basic rails in preference to Bessemer, the great $75,000,000 plant of the steel corporation at Gary, Indiana, is being built for the production of basic iron and steel instead of Bessemer. Until the Gary plant is completed the steel corporation would not have been able to provide basic rails to meet the demands of the railroads; but by the purchase of the Tennessee Company it immediately gets into the market with the control of the only basic rail plant in the country, except that recently built by

Schwab at Bethlehem. This move on the part of the steel corporation is of world-wide influence and importance. It marks a new epoch in the steel industry of America as emphatic as that which was inaugurated by the organization of the steel company itself. As Alabama is destined to fulfill Mr. Hewitt's prediction of dominating the basic steel industry of the world, it was essential for the best interests of the steel corporation that it should get into that field at the first possible opportunity, and it has utilized the present situation to do so at a price which adds enormously to its own strength."

This new situation of the Tennessee Company, with its stupendous reinforcement of capital and influence, involved naturally problems of a more complex and extensive character than had ever before confronted it. It called for a captain initiated in steel corporation psychics and practices, one who had, so to speak, a bird's-eye view of the whole iron and steel world, and the grip on essentials. Casting about, therefore, the steel corporation officials hit upon an utterly unexpected man, — one George Gordon Crawford. The first intimation of this appointment received in Birmingham was an Associated Press despatch. Then followed a story in the *New York Herald,* November 21, 1907, making the following statement:

"George G. Crawford has been selected by the steel corporation to work out the problem of the Tennessee Coal, Iron, and Railroad Company. He was elected president of that company yesterday to succeed John A. Topping, whose office as chairman of the board was abolished at the meeting. Mr. Crawford is one of the group of young men who are the hustling heads of the subsidiary companies of the steel corporation. He has been manager of the big McKeesport plants of the National Tube Company. . . . Mr. Crawford will leave immediately for Birmingham to take up the duties of the office. He will make that city his headquarters, and the steel corporation heads have let it become known that Mr. Crawford's headquarters will be at Birmingham."

The decided flavor of public interest, even curiosity, in the new appointment was a trifle odd as those things generally go, for Birmingham folk had become as used to administration changes in the Tennessee Company as to the revolving seasons. But this time with the giant armored figure, the United States Steel Corporation, in the background, and owing to the fact that this assignment was bruited a permanency, expectancy stood on tiptoe.

The new president is a Southern man, a Georgian, as were Frank Gilmer, builder of the old South and North, John T. Milner, the founder of Birmingham, and various other men concerned in these records at an earlier period. Gordon Crawford was born on a cotton plantation near Madison, in Morgan County, August 24, 1869. His father was Dr. George G. Crawford of Atlanta, and his mother, Margaret Reed Howard of Savannah. He was graduated in mechanical engineering from the Georgia School of Technology in the class of 1890. He then went abroad to take a course in chemistry at the Karl Eberhard University at Tübingen. He had his own notions and wanted to avoid the institutions frequented by English and Americans, so he stepped over Heidelberg and the rest, and planted foot in that lonely little student town shaped centuries ago by the mailed hand of the first duke of Würtemburg. The little seat of scholarship, deep hid in the circle of the Black Forest, is German to its marrow. "Tübingen was owned from cobblestone to steeple by the fellows themselves," said Mr. Crawford; "they came from everywhere, excepting, at that time, from the English-speaking countries." There were, in fact, but three Americans in the whole place, and one of the three was Gordon Crawford. Pipe, stein, and "book sometimes," and the couple of years in the chemical laboratory whistled by. Then after a run over the continent young Gordon Crawford came back to the States to settle down to an American grind. Being now nearly twenty-three years old, he found he must begin to earn his own salt. Oddly enough his initial essay was in the Birmingham District. He came, obscure and unheralded, for no one knew him then. He entered the service of the Sloss Iron and Steel Company as draftsman in 1892, when "Tom" Seddon was president of that company. The coal and iron industry of the South was beginning to send out signals of distress, for the panic year of '93 was sighted. Believing that he could learn the business better and on more scientific lines in Pittsburg, Gordon Crawford went there after a three months' trial in Birmingham. He did not know a living soul in that city either. His only assets were his wits, his good health, his technical training, and what his friends call "his incorrigible personality." He landed a job with the Carnegie Steel Company, after a systematic canvass of the different plants, and started in as chemist in the laboratory of the Edgar Thomson steel works. The young man buckled down to three years of

routine, with the idea of learning every detail of the iron and steel business. It is said that he refused promotion over and over with fair increase of salary, determined to wait until he mastered the details of each of the various departments in which he elected to work. After filling all the positions in the laboratory except that of chief chemist, Mr. Crawford took a reduction in wages to get into the engineering department, where he was employed as draftsman, and thus acquired practical experience in both chemistry and mechanical engineering, which he had studied and which are the two important branches of the iron and steel business. This experience was of great value to him in all the subsequent executive positions which he has held.

In 1895 he was appointed assistant superintendent of the Edgar Thomson furnaces. The following year he left the Carnegie Steel Company to be superintendent of the furnaces of the National Tube Company at McKeesport, and subsequently the steel works comprising the Bessemer department and blooming mills were also placed under his charge. He returned to the Carnegie Steel Company as superintendent of the Edgar Thomson furnaces, then and now the largest blast furnace plant in the world. Very few men who have left the Carnegie Steel Company have ever been asked to return to its employ. After two years' service in this position he returned to the National Tube Company at McKeesport as manager of the national department, which comprised all the works of the National Tube Company, including the following: At McKeesport, blast furnaces, converting and blooming mills, plate and rolling mills, tube and pipe mills; at Riverton, the Boston Iron and Steel Works; at Versailles, the National Galvanizing Works; and on the South side of Pittsburg, the Republic Iron Works. The aggregate of works employed ten thousand men and was at the time one of the three largest plants of the United States Steel Corporation, the other two being the Homestead Works of the Carnegie Steel Company, and the South Works of the Illinois Steel Company. While manager at this point, Mr. Crawford remodeled the entire department. The old works were torn down and new works put in their place without diminishing the quantity of material being manufactured, — a particularly difficult operation. About thirteen million dollars was spent in rebuilding the works. Mr. Crawford also introduced various original devices

and labor-saving expedients in this plant. Among his inventions, for which patent was granted in 1902, was a water-sealed valve, an entirely new type of furnace valve and dust catcher, operated by water. This is in use to-day in most of the important blast furnace plants in the United States.

While manager of the national department, Mr. Crawford served on the following committees of the United States Steel Corporation: The coke committee, the wage committee, the blast furnace committee, the roll committee, the ingot mold committee, and the committee of engineers for the Duluth plant of the Minnesota Steel Company. While serving on these standing committees he revisited the old world and kept in touch with the iron and steel works and industrial conditions abroad. In Germany, especially, he was granted many privileges and opportunities for inspection seldom accorded any American.

As chief executive of the Tennessee Coal, Iron, and Railroad Company, Mr. Crawford has managed the affairs of his company since his appointment in 1907 with consummate skill and diplomacy. Exceedingly exacting, sober and systematic in office, he is at the same time a thorough disciplinarian and is well informed, as has been shown, "all along the line." He keeps in close touch with each department, but never in any sense interferes, giving to every department manager free and wide scope, and respect and appreciation for skillful, intelligent, and efficient service. His suggestions, viewpoints, and directions he states quietly, logically, and so simply and clearly there is never any mistake as to what he means. He is curiously without idiosyncrasies and he does not expect impossibilities. "It's simply a natural development we are after," he says. "If every month returns are a little bit better than the month before, and a steady, gradual improvement is shown, I am perfectly satisfied."

The Crawford administration is the twentieth administration of the Tennessee Company. Its full organization comprises the following departments and officers:

Executive Department

George G. Crawford, President.
Frank H. Crockard, Vice-President.
H. C. Ryding, Assistant to Vice-President.

Treasury Department

L. T. Beecher, Secretary and Treasurer.
J. N. Coffin, Assistant Secretary and Assistant Treasurer.

Accounting Department

F. B. Winslow, Auditor.

Land Department

W. B. Allen, Manager.

Sales Department

F. A. Burr, General Manager of Sales.
Willard Wilson, Assistant General Manager of Sales.
J. W. Whatley, Manager of Coal Sales.

Traffic Department

A. W. Carey, Traffic Manager.

Purchasing Department

W. A. Major, Purchasing Agent.

Legal Department

Walker Percy, Counsel.

Operating Department

Ore Mines and Quarries

Edwin Ball, General Manager of Ore Mines.
C. E. Abbott, Chief Engineer.

Coal Mines and Coke Ovens

E. H. Coxe, General Superintendent.
Robert Hamilton, Chief Engineer.

Steel Plant and Furnaces, Ensley Works

C. J. Barr, General Superintendent.
E. J. Best, Chief Engineer.
H. M. Urban, Superintendent of Construction.

Alice, Bessemer, and Oxmoor Furnaces

E. P. Williams, Superintendent.

Bessemer Rolling Mills

P. J. Mundie, Superintendent.

The organization of the various former administrations has been given in preceding chapters. A list of the presidents of the celebrated company, beginning with the Sewanee Mining Company, parent stock of the Tennessee Company, is as follows: Samuel F. Tracy, capitalist, New York City (1852–60); A. S. Colyar, prominent lawyer and journalist of Tennessee and

George Gordon Crawford

President of the Tennessee Coal, Iron, and Railroad Company

ex-member of the Confederate Congress (1866–68); A. J. Duncan, president of Bank of the Union of Nashville, Tennessee (1868–70); A. S. Colyar (second term) (1870–72); Judge J. L. Whitworth, president of the Fourth National Bank of Nashville, Tennessee (1872–74); Colonel Sam Tate, one of the big pioneer railroad men of the South; Moses J. Wicks of Memphis; Mike Burns, president of the Nashville, Chattanooga, and St. Louis Railroad; L. B. Fite of Nashville; Dr. W. Morrow, J. C. Warner of Nashville; Nat Baxter, Jr., of Nashville (1882–86); Enoch Ensley of Memphis (1886–87); Nat Baxter, Jr. (second term) (1887–89); John C. Brown, ex-governor of Tennessee (1889); T. C. Platt, United States Senator from New York (1889–91); Nat Baxter, Jr. (third term) (1891–1901);[1] Don H. Bacon of Minnesota (1901–06); John A. Topping of Ohio and Frank Hearne Crockard of West Virginia (1906–07);[2] George Gordon Crawford of Georgia (1909–. . .).

As thus shown, the bench and bar of Tennessee has been strongly represented in the executive department of this company in the past. So also have been the Confederate States Army, the Confederate Congress, the prominent banks of Tennessee, certain railroads of the South, Wall Street, and the United States Senate, while from the Birmingham District have come the two great pioneer leaders of the coal and iron business.

Tracing the origins of the great company to its source in the mountains of Tennessee and following its evolution stage by stage, its history proves, indeed, to be a singularly interesting one. Certainly the company has survived tremendous catastrophies, narrow escapes from bankruptcy, legal entanglements, and Wall Street manipulations such as have few other mining companies in the whole United States. At the same time it has set afoot more "big doings" and influenced a wider territory of the South than has any other company. It is the Birmingham District's biggest asset, for it is the company around which the whole mineral region of the State swings.

Although, as Mr. Crawford expresses it, "Simply a natural development is what we are after," the Tennessee Company has

[1] During this third Baxter administration from 1892–94, the leading resident officers of the Tennessee Company in Birmingham were H. F. DeBardeleben and T. H. Aldrich.

[2] John A. Topping served as chairman of the executive board of the Tennessee Company, a position comprising the activities of president. Mr. Crockard was vice-president and general manager, and the resident officer in charge.

in reality entered upon a great era of expansion under his management. While strengthening each department of the company, and giving the impetus to what may be termed "team play" throughout, he has introduced many new features and improvements. Rail manufacture at Ensley has, during his administration, passed the experimental stage in every particular, so that now steel rails may be made to any specification and with the same uniformity and excellence "as in any other rail mill," to quote his own words.

Apart from retaining and improving all on the ground worth retaining, the new president has drawn his own outline for the future development of the Tennessee Company properties, and made his own studies with a view to diversifying and expanding the company's steel product. Finding that every plan and design for future development on a genuinely titanic scale came to an abrupt halt when confronted by the condition of insufficient water for the manufacturing plants, Mr. Crawford's first step in laying the cornerstone, as it were, to his great structure, has been to provide an adequate water supply.

This has ever been the one lack of the Birmingham District for manufacturing enterprises on a modern scale. From the very time old Pratt mines were opened, way back in the seventies, the need had been felt.

The water supply for the Ensley plants of the Tennessee Company is drawn from Village Creek, and supplemented during the dry season by water from the Birmingham Water Works Company. In periods of drouth not a sufficient quantity can be obtained to enable the plants to operate at full capacity; nor has it been feasible to produce power cheaply on account of lack of water for condensing or gas washing. To remedy this serious, and indeed rather menacing situation, an exhaustive investigation of the most economical source of water supply was instituted by Mr. Crawford shortly after his inauguration as president, and it has been going on for a year and a half under the direction of Morris Knowles of Pittsburg. Mr. Crawford says in reference to this matter:

"This investigation has involved a study of all the feasible methods of bringing water cheaply to the vicinity of Ensley. Studies of the records of rainfalls and watershed yields have been made. Stream gaugings of all the important streams in the vicinity of Birmingham and evaporation tests at the Shades Mountain reservoir of the Birmingham Water Works Company

and at East Lake have been made, and a large amount of valuable data has been secured from which the method outlined below has been designed.

"The plan which has finally been adopted is to construct a dam across the channel of Village Creek immediately above the mouth of Venison Creek, impounding the water of Village Creek and its tributaries. A channel will be cut up one of the tributaries, Camp branch, to a location for the pumping site, shown on the accompanying map. This pumping station will have a pumping capacity of 25,000,000 gallons per day, and from it a 42-inch pipe-line, two and an eighth miles long, will carry the water to a reservoir, from which a distributing pipe will carry it by gravity to the Ensley works, and to the tracts of land which the Tennessee Company has purchased below Ensley, the reservoir being about equally distant from both places.

"This scheme furnishes the advantage of maximum usage of water with minimum storage, for the reason that the waste waters from the Ensley works will flow back into Village Creek, and will then pass through the channel in Camp branch to the pumping-station again, several months being occupied in the travel of the water through the reservoir, which will give it time to deposit its sediment and cool. Some of the details regarding the project are as follows:

"Height of the dam, 90 feet.

"Length of the dam, 490 feet.

"Length of the lake, five miles.

"Total impounding capacity of the reservoir, 2,500,000,000 gallons.

"The dam will be built of concrete, and the crest of the dam will be a driveway connecting the opposite sides of the valley, the spillway being spanned by a concrete arch.

"During the winter and spring the reservoir will fill, and during a normal year a quantity of water practically equivalent to the reservoir capacity will flow over the dam; thus the lake will be kept fresh.

"Of the 2,500,000,000 gallons impounded in the reservoir, the total usable quantity will be practically 1,700,000,000, leaving a considerable depth of reservoir to allow for silting.

"The shores of the reservoir will be planted with trees and protected from the washing spring rains.

"The dam will be constructed to permit of an increase of fifteen feet in height, which will yield a further supply of water should it be needed, and the pumping-station will be designed to permit the installation of an additional 25,000,000 gallons pumping capacity.

"The Birmingham Southern Railroad Company will extend its tracks from near Wylam to the pumping-station for permanent use, and a temporary track to the site of the dam near Venison Creek for the delivery of material will be constructed.

A camp for the employees engaged in the building of the dam will be built near the site. A thorough organization will be effected, and the entire work will be carried on by the Tennessee Company."

When this water supply is secured it will be possible to proceed with the plans for extending the company's operations to meet the requirements of the Southern markets for which some plans have been made and are now in the course of execution. A large tract of land has been purchased which comprises all of the flat level lands in Opossum Valley, extending from Wylam on the north to Dolomite and the Woodward holdings on the south, and from the Flint Ridge holdings of the Tennessee Company on the east solidly to its large holdings of land on the Pratt Coal Field. This furnishes over a thousand acres of flat level land well adapted as sites for manufacturing plants. It lies on a direct line from the red ore holdings of the Tennessee Company on Red Mountain to its large holdings of coal land in the Pratt Coal Field. An excellent grade of dolomite is on the tract, and it is as close to the new water supply as is the Ensley steel plant.

On this land, which is the cheapest point of assemblage, on a large scale, of ore, coal, flux, and water, in the Birmingham District, the manufacturing plants of the Tennessee Company for the immediate future will be built. There is now under consideration on this site, the following plants: namely, a by-product coke oven plant with a capacity of 3,000 tons of coke per day; a gas engine driven electrical power plant of about 10,000 horse power to be furnished with fuel from the gases made in the by-product coke oven plant; and in the Pratt field, near the site of the new pumping station, a coal mining shaft of large capacity is being opened, with a modern mining camp of model design.

On the portion of this land the American Steel and Wire Company, a subsidiary of the United States Steel Corporation, is constructing a plant for the manufacture of wire, nails, and fencing, with a capacity of 400 tons per day. This plant will be of the most modern design, all of the machinery being driven by electric motors from current furnished from the new power plant built by the Tennessee Company. The supply of steel billets for this plant will also be furnished by the Tennessee Company.

For nearly half a century this great company has stood at

the front in the industrial affairs of the South. At no time in the whole of its tumultuous history did it come so near to crushing failure and utter collapse as during the panic of 1907, and the dramatic circumstances of its sudden merger with the United States Steel Corporation mark the most extraordinary step in all of its extraordinary history.

And now the Crawford administration that is beginning to build on such a stupendous scale — who can forecast its end? Certainly this new man in Alabama — this United States Steel Corporation man — has far-reaching plans for the future. He has, however, that rather peculiar notion in the background of his ideas that there are other issues at stake in the management of a coal and iron company as well as results in dollars and cents. In fact, he is one in spirit with the historian and the philosopher in these lines: *"Industrialism is not altogether unlovely. Repellent as are many of its characteristics, selfish as are its aims, doubtful as are the means it frequently uses, it does yet sometimes, perhaps always, conduce to the accomplishment of worthier objects in better ways than those that fill the minds of its moving spirits. Great cities are built that money may be made; but great cities, when built, are the nurses of art and letters, the centers of enlightenment, the fields of charity. . . . Let us hope, at least, that from the co-operation of so many energies something better and fairer than furnaces or mills can fashion may be contributed to the life of our country and of the world."* [1]

"Culture looks beyond machinery. . . . Culture has one great passion, — the passion for sweetness and light. It has one even yet greater, — the passion for making them prevail." [2]

In a word, it is recognized that Alabama does not rest her sole reliance for future emprise upon her railroads and her coal and iron wealth, — and a little cotton, — but is coming to regard them as means to higher endeavor and achievement. To-day has come with its vast range of possibilities, — infinite promise of Alabama, — seen in long vista ahead as the modern lights are turned on.

[1] William Garrott Brown, "The History of Sheffield."
[2] Matthew Arnold, "Sweetness and Light."

CHRONOLOGICAL TABLE

Date.

1798. First blacksmith shop at Took-au-batchee, Mississippi Territory (site of Fort Toulouse).

1801. Federal Government smithy at Fort St. Stephens.

1803. Depot of iron supplies at St. Stephens.

1813–1820. Settlements founded by Andrew Jackson's smiths in mineral region.

1818. First blast furnace of Alabama built.

1819. Alabama admitted to Union.

1820–1850. Forges erected in counties of Bibb, Shelby, Tuskaloosa, Talladega, and Calhoun.

1827. First coal mined in Warrior Coal Field.

1829. Mount Vernon Arsenal established.

1830. Charter granted for Decatur and Tuscombia Railroad (first railroad south of Alleghanies).

1846. Shelby Iron Works built by Horace Ware.

1848. First State geologist appointed.

1854. First coke made from Alabama coals (for foundry use).

—— Charter granted for Alabama Central Railroad (Old South and North, now part of Louisville and Nashville system).

1858. First rolling mill built in State (at Shelby).

—— Appropriation granted by Legislature for reconnaissance of route for South and North Railroad.

1860. First finished bar iron turned out by Shelby Rolling Mill.

1861–1865. Civil War Period.

—— General Gorgas appointed Chief of Ordnance of Confederacy.

—— Organization of Confederate Nitre and Mining Bureau.

—— Arsenal transferred from Mount Vernon to Selma.

—— Confederate Naval Foundry built.

—— First underground mining in Cahaba coal field started.

—— Blast furnaces built at Oxmoor, Irondale, and Brierfield.

—— Red Mountain iron ore first used on large scale.

Date.

1865. Fall of Selma and destruction of all iron works.

1866. Irondale Furnace rebuilt.

1867–1868. Reconstruction of plants in Bibb and Shelby counties.

1868–1869. David Thomas of Pennsylvania, pioneer of anthracite iron trade in America invests in Alabama mineral lands.

1871. City of Birmingham founded by John T. Milner.

—— Geological Survey Work inaugurated by University of Alabama.

1872. Reconstruction of Oxmoor Plant by Daniel Pratt and Henry F. DeBardeleben.

—— Advent of Louisville and Nashville into Alabama.

—— Organization of Woodstock Iron Company.

—— Founding of Anniston.

1873. Panic. Cholera plague in Jones Valley. Fall of Birmingham.

—— Re-establishment of State Geological Survey by Act of Legislature.

—— Appointment of Eugene A. Smith, State Geologist.

1874. Discovery of Pratt Seam of Coal.

1875. Formation of Co-operative Experimental Coke and Iron Company.

1876. First coke pig iron made in Alabama (Oxmoor).

1877. Succession of coal seams in Warrior Field demonstrated by Truman H. Aldrich.

1878. Pratt Coal and Coke Company formed.

—— Beginning of progress of Birmingham.

1879–1880. First rolling mills built in Birmingham.

—— First blast furnace (Alice), built in Birmingham.

1882. Nail plant established at Brierfield.

1886. Record of one hundred and fifty tons output of pig iron made by Alice Furnace (one day).

—— Founding of Bessemer. Progress of Sheffield.

1887. Record of one hundred and ninety-five tons daily output of pig iron successively maintained at Bessemer furnaces, marking first step in modern blast furnace practice.

1886–1887. Entrance of Tennessee Coal, Iron, and Railroad Company into Alabama.

1889–1890. Export trade of coal with Gulf ports, West Indies, and South America inaugurated by T. H. Aldrich.

MAIN EVENTS IN HISTORY OF TENNESSEE COAL, IRON, AND RAILROAD COMPANY, SUBSIDIARY COMPANY OF UNITED STATES STEEL CORPORATION.

Date.

1850. Discovery of Sewanee Coal Seam by Leslie Kennedy.

—— Purchase of coal lands on Cumberland Plateau by W. N. Bilbo of Nashville, Tennessee. Sale to New York speculators.

1852. Organization of Sewanee Mining Company (parent stock of Tennessee Coal, Iron, and Railroad Company).

—— Charter granted by Tennessee Legislature. (Tracy administration.)

1853. Construction of company railroad begun.

1856. First coal shipped.

1858. Failure of company. Fresh capital invested. Reorganization plans.

1861–1865. Property worked alternately by Confederate Government and Federal authorities.

1866. Reorganization of company as Tennessee Coal, Iron, and Railroad Company. Entrance of Colonel A. S. Colyar. Colyar administration.

1869. Construction of "The Fiery Gizzard."

1870. New charter granted by State of Tennessee.

1871. Contract made with State of Tennessee to work convicts.

1881. Inman régime acquires control. First iron is made by company. Sewanee Furnace acquired by company. Name changed to Tennessee Coal, Iron, and Railroad Company.

1882. Merger with Southern States Coal, Iron, and Land Company Ltd. Capital stock increased to three million dollars. Property listed on New York Stock Exchange. Warner administration.

1885. Option secured on Pratt Coal and Coke Company of Alabama.

1886. Purchase of Pratt Coal and Coke Company (comprising Pratt Mines, Linn Iron Works, and Alice Furnace Company. Capital stock increased to ten million dollars. Town of Ensley founded. Ensley administration.

1887. Organization of First Engineer Corps of company by Erskine Ramsay. Baxter administration.

1888. "The Big Four" at Ensley blown in.

1889. Brown-Platt administration. Duncan régime.

1892. Acquisition of DeBardeleben Coal and Iron Company and Cahaba Coal Company. Capital stock made twenty million dollars. Entrance of DeBardeleben, T. H. Aldrich, and David Roberts. Headquarters of company removed to Birmingham.

Date.

1895. Basic iron made on commercial scale by George B. McCormack. (Baxter administration.)

1896. Export trade with European ports inaugurated.

1898. (Baxter administration, continued.) Construction of steel plant begun.

1899. First ton of steel made on Thanksgiving Day.

1901. Don Bacon of Minnesota elected president. Reconstruction work inaugurated.

1905. Topping-Crockard administration. Modern steel plant built.

1907. United States Steel Corporation acquires control of Tennessee Company.

1908. Present day administration under George Gordon Crawford.

1909. Water supply provided.

—— New properties acquired for future operations on a modern scale.

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